

# **Fathers' Perinatal Mental Health: Impacts, Interventions and Supports**

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1<sup>st</sup> March, 2017

## Statement of Authorship and Sources

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution. No other person's work has been used without due acknowledgement in the main text of the thesis. All research procedures reported in the thesis received the approval of the relevant Ethics/Safety Committees (where required).

In all published research studies, I was the Principal Investigator, contributed 50% or more, and planned and prepared the work for publication. The four studies reported in this thesis were planned and conducted in collaboration with my primary supervisor Dr Thomas Whelan<sup>1</sup> and my associate supervisor Dr Rebecca Giallo<sup>2</sup>. Dr Pamela Pilkington<sup>1</sup> contributed to the completion of studies reported in Chapters 7-9. Dr David Hamilton<sup>1</sup> provided guidance during the development of the study reported in Chapter 9. Dr Peter Wilson<sup>1</sup> provided administrative support in the final year of the program.

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## Abstract

**Background.** Fathers' perinatal mental health problems have far reaching implications not only for themselves, but also for their partner, their couple relationship, and their children. The primary objective of this thesis by publication was to generate evidence to inform the development of policy and intervention efforts to promote fathers' mental health in the perinatal period. The aims of the research were four-fold: first, to determine the extent to which fathers' experiences of mental health problems impact parenting and their children; second, to undertake a systematic review into interventions targeting fathers' perinatal mental health; third, to explore fathers' support needs in the perinatal period; and finally, to investigate midwives' perceptions and experiences of working with fathers.

**Method.** A multi-method approach was adopted across four studies. The first study used data from a longitudinal study of a nationally representative sample of Australian children and their families ( $N = 3,741$  fathers) and explored mechanisms that link fathers' postnatal distress to later child outcomes. Second, a systematic review of existing research detailing interventions targeting expectant and new fathers' mental health was conducted. Third, fathers' perceived support needs to accessing mental health and parenting support in the perinatal period were explored through qualitative interviews with fathers ( $N = 20$ ). Finally, midwives' perceptions and experiences of engaging fathers in the perinatal period were surveyed via a national online survey ( $N = 106$ ) and qualitative interviews ( $N = 13$ ).

**Results.** In Study 1 (Chapter 6), results indicated that fathers' postnatal distress and low parenting self-efficacy (PSE) were associated with higher levels of fathers' parenting hostility and lower levels of parenting consistency when children were aged 4-5 years. In turn, this was associated with children's emotional and behavioural difficulties when aged 8-9 years. Additionally, fathers' levels of parenting warmth when children were aged 4-5 years was associated with fathers' postnatal PSE and children's prosocial outcomes when aged 8-9 years. In Study 2 (Chapter 7), the systematic literature review of interventions identified 11 studies, only five of which demonstrated significant intervention effects. The review

highlighted the paucity of literature on interventions targeting fathers' perinatal mental health and identified specific design issues related to outcome measures, timing of content delivery, and the mode of intervention delivery across the studies. Study 3 (Chapter 8) described a wide range of fathers' experiences related to seeking support and several subthemes were identified within each broad area of inquiry: 1) support accessed; 2) support needs; 3) barriers to support; 4) facilitators of support; and 5) timing of support. Finally, online survey results in Study 4 (Chapter 9) indicated that the midwives considered engaging fathers to be a part of their professional role and that father-specific training is needed to develop their knowledge and skills in this area. Analysis of the interview data led to the identification of factors specific to midwives, the external workplace, and fathers that can impact a midwife's ability to engage men in their services.

**Conclusion.** Findings from this thesis extend our theoretical understanding of issues related to fathers' perinatal mental health in three key areas; intergenerational health, the role of fathers' PSE, and models of men's help-seeking behaviour. Practical implications include intervention and support strategies to promote fathers' perinatal mental health, and building capacity in the service system so perinatal health professionals can engage, support, and be more inclusive of fathers. Recommendations for future research focusing on fathers' perinatal mental health include the exploration of diverse father groups, longitudinal research designs, enhanced intervention design and evaluation, and expanded professional training resources.

## Research Outputs

### Published peer reviewed papers as chapters of thesis

**Rominov, H.**, Giallo, R., & Whelan, T. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour and children's emotional-behavioural functioning: A longitudinal study. *Journal of Family Psychology*, 30, 907-917. doi: 10.1037/fam0000216

**Rominov, H.**, Pilkington, P.D., Giallo, R., & Whelan, T. (2016). A systematic review of interventions targeting paternal mental health in the perinatal period. *Infant Mental Health Journal*, 37, 289-301. doi: 10.1002/imhj.21560

**Rominov, H.**, Pilkington, P.D., Giallo, R., & Whelan, T. (2017). "Getting help for yourself is a way of helping your baby": Fathers' perceived support needs for mental health and parenting in the perinatal period. *Psychology of Men & Masculinity* (in press).

**Rominov, H.**, Giallo, R., Pilkington, P.D., & Whelan, T. (2017). Midwives' perceptions and experiences of engaging fathers in the perinatal period. *Women and Birth* (in press). doi: 10.1016/j.wombi.2016.12.002

### Additional peer reviewed papers published during candidature

Pilkington, P.D., Milne, L.C., **Rominov, H.**, Giallo, R., & Whelan, T.A. (2016). *Partners to Parents*: Development of a couples-based on-line intervention to prevent perinatal depression and anxiety. *Advances in Mental Health*, 1-16.

Pilkington, P.D., & **Rominov, H.** (2017). Fathers' worries during pregnancy: a qualitative content analysis of Reddit. *Journal of Perinatal Education* (in press).

### Invited presentations

**Rominov, H.** (2016). *Fathers' perinatal mental health*. Psychology Research Colloquium, Federation University, Ballarat, Australia, May 3.

- Rominov, H.** (2016). *Symposium on Fatherhood Research in Australia: Where are we up to? Where to now?* Family Action Centre, University of Newcastle, Australia, in collaboration with the Australian Research Alliance for Children and Youth, July 20.
- Rominov, H.** (2016). *Supporting fathers' perinatal mental health.* Healthy Mothers, Healthy Families, Murdoch Childrens Research Institute, Melbourne, Australia, September 22.

### **Conference presentations**

- Rominov, H.,** Giallo, R., & Whelan, T. (2015). *Fathers' mental health, parenting experiences and preferred supports in the perinatal period.* III Faculty of Health Sciences Higher Research Degree Seminar, Australian Catholic University, Melbourne, Australia, September 28.
- Rominov, H.,** Giallo, R., & Whelan, T. (2015). *Fathers' distress and parenting self-efficacy in the postnatal period, later parenting behaviour and children's emotional-behavioural functioning: Longitudinal evidence from an Australian cohort.* The Australiasian Marcé Society Conference, Adelaide, Australia, October 22-24.
- Rominov, H.,** Pilkington, P.D., Giallo, R., & Whelan, T. (2015). *Fathers' perceived support needs, barriers and facilitators to accessing mental health and parenting support in the perinatal period.* "And father makes three: Family inclusive practice", Australian Association for Infant Mental Health Inc. National Conference, Sydney, Australia, October 29-31.
- Rominov, H.,** Giallo, R., Pilkington, P.D., & Whelan, T. (2016). *Fathers' perinatal mental health.* 36<sup>th</sup> Annual Society for Reproductive and Infant Psychology Conference. Leeds, United Kingdom, September 13-14.
- Rominov, H.,** Giallo, R., Pilkington, P.D., & Whelan, T. (2016). *Fathers' perinatal mental health: An important yet neglected topic.* International Marcé Society Biennial Scientific Meeting, Melbourne, Australia, September 26-28.

## **Media attention**

Australian Catholic University Newsroom (2015). *Fathers' mental health crucial to better parenting*. Retrieved from <http://research.acu.edu.au/2015/09/fathers-mental-health-crucial-to-better-parenting/>

Child and Family Blog, Department of Psychology, Cambridge University (2016). *Postnatal depression in fathers linked to parenting problems years later*. Retrieved from <http://childandfamilyblog.com/postnatal-depression-fathers-parenting-problems/>

University of Newcastle, Australian Fatherhood Research Network (2016). *Impact of interventions on fathers' mental health*. Bulletin 34.

Parent Hub (2016). *Fathers' mental health crucial to better parenting*. Retrieved from <http://www.parenthub.com.au/news/parenting-news-news/fathers-mental-health-crucial-to-better-parenting/>

Fatherhood Global Blog (2016). *Postnatal distress in fathers linked to parenting problems years later*. Retrieved from <https://fatherhood.global/postnatal-distress-in-fathers-parenting-problems/>

Family Included Blog (2017). *Midwives should receive education in engaging with fathers*. Retrieved from <http://familyincluded.com/midwives-education-engaging-fathers-australia/>

Family Included Blog (2017). *Teaching fathers how to massage their partners and babies is good for fathers' mental health*. Retrieved from <http://familyincluded.com/fathers-massage-mental-health/>

## **Awards**

1<sup>st</sup> place and People's Choice Award in 3 Minute Thesis Final. Australian Catholic University, Melbourne, Australia, September 11, 2015.

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## List of Acronyms

ABS	Australian Bureau of Statistics	IVF	In Vitro Fertilisation
ABSc	Bradburn Affect Balance Scale	K-6	Kessler Psychological Distress Scale (6 item)
ACM	Australian College of Midwives	LSAC	Longitudinal Study of Australian Children
AIFS	Australian Institute of Family Studies	MLR	Maximum Likelihood Estimation with Robust Errors
ALSPAC	Avon Longitudinal Study of Parents and Children	OCD	Obsessive Compulsive Disorder
BSI	Brief Symptom Inventory	POMS	Profile of Mood States
CES-D	Centre for Epidemiological Studies Depression Scale	PSE	Parenting Self Efficacy
CFI	Comparative Fit Index	PSI	Parenting Stress Index
EPDS	Edinburgh Postnatal Depression Scale	PTSD	Post-Traumatic Stress Disorder
FaHCSIA	Department of Families, Housing, Community Services and Indigenous Affairs	RAS	Relationship Assessment Scale
HADS	Hospital Anxiety and Depression Scale	RCT	Randomised Control Trail
		RMSEA	Root Mean Square Error of Approximation
		SAS	Zung's Self-Rating Anxiety Scale

SDQ	Strengths and Difficulties Questionnaire	SRMR	Standardized Root Mean Square Residual
SDS	Zung's Self-Rating Depression Scale	STAI	State Anxiety Inventory
SEP	Socio-Economic Position	STAXI	State Anger Inventory
SF-36	Short Form (36) Health Survey	TPB	Theory of Planned Behaviour
		TLI	Tucker-Lewis Index

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## Chapter 1: Introduction and Overview

Over the past decade, the importance of fathers' mental health in the perinatal period, the time encompassing pregnancy and the first 12 months postpartum, has been increasingly recognised. Numerous studies have reported that a significant proportion of expectant and new fathers exhibit signs of perinatal distress. Widely cited prevalence rates for fathers' perinatal depression are approximately 10% (Paulson & Bazemore, 2010), and between 10-17% for fathers' perinatal anxiety (Leach, Poyser, Cooklin, & Giallo, 2016). There is an emerging body of research on other perinatal mental health concerns among fathers, such as stress, trauma, and fatigue (e.g., Bradley & Slade, 2011; Cooklin, Giallo, & Rose, 2012; Giallo, Cooklin, Zerman, & Vittorino, 2013). Fathers' perinatal mental health problems have far reaching implications not only for themselves, but for their partner, their couple relationship, and on their children's health, wellbeing and development (Kane & Garber, 2004; Ramchandani et al., 2008). Consequently, fathers' perinatal mental health is a public health issue of great importance. Nonetheless, attention has only recently been directed toward the mental health of expectant and new fathers, and much remains to be explored.

As such, the overarching objective of this thesis was to generate evidence to inform the development of policy and intervention efforts to promote the mental health of fathers in the perinatal period. To achieve this objective, four studies were conducted, which form a coherent thesis through their common focus on fathers' wellbeing in the perinatal period. First, a secondary analysis of data drawn from a longitudinal study of over 3,700 Australian children and their families explored the mechanisms that link fathers' postnatal distress to later child outcomes (Rominov, Giallo, & Whelan, 2016). Second, a systematic literature review of interventions targeting expectant and new fathers' mental health was conducted (Rominov, Pilkington, Giallo, & Whelan, 2016). Third, fathers' perceived support needs to accessing mental health and parenting support in the perinatal period were explored through qualitative interviews with fathers (Rominov, Giallo, Pilkington, & Whelan, 2017a). Finally, midwives' perceptions and experiences of engaging fathers in the perinatal period were

surveyed via a national online survey and telephone interviews (Rominov, Giallo, Pilkington, & Whelan, 2017b).

This thesis comprises both published and unpublished scholarly works, and is therefore presented as a thesis by publication in accordance with section five of the Australian Catholic University's *Guidelines on the Preparation and Presentation of a Research or Professional Doctoral Thesis for Examination*. An overview of the epidemiology of fathers' perinatal mental health is presented in Chapter 2. Chapter 3 outlines issues related to supports and interventions for fathers in the perinatal period. The rationale and aims of the research are then described in Chapter 4. In Chapter 5, a methodological rationale is provided, which details the multi-method approach used in this program of research. Chapters 6-9 present the four studies that were conducted. Finally, a general discussion of the research findings is presented in Chapter 10, which includes the theoretical and practical implications of the thesis results, limitations of the research, and suggestions for future investigations.

## **Chapter 2: Epidemiology of Fathers' Perinatal Mental Health**

### **Overview**

This chapter reviews key issues related to the epidemiology of fathers' perinatal mental health, such as important transitions associated with fatherhood, prevalence rates, risk factors, short- and long-term impacts, and mechanisms that link fathers' perinatal mental health and child outcomes. The chapter concludes by highlighting fathers' perinatal mental health problems as a significant public health issue.

### **The transition to fatherhood**

A man's investment in his identity as a father is influenced by several factors, such as personal family history, socio-economic status, education, relationship status, and cultural background (Bronte-Tinkew, Carrano, & Guzman, 2006; Dermott, 2014). In particular, social changes regarding de facto relationships, marriage, divorce, and remarriage have complicated family dynamics and consequently, impacted men's fatherhood experiences (Eggebeen & Knoester, 2001). In developed Western societies, it is now commonplace for fathering to be practiced across different households and so family life can involve blended combinations of bloodlines (Carrington, 2013). Consequently, different family contexts create both opportunities and challenges for men's practice of fatherhood.

For men who are biological fathers and reside in the same home as their children, opportunities to invest in the identity and role of a father are considerable. The clearest cultural scripts exist for this pattern of fatherhood (Eggebeen & Knoester, 2001) and it is the pattern that has been studied the most extensively in the context of the early parenting period. As such, this review draws predominantly on literature about biological fathers who live with their children, often from middle-to-high income families in Western cultures. Over recent decades, a paradigm shift has become evident in relation to the role of these fathers in the family system. For example, fathers have evolved from being the economic breadwinner of the mid-20<sup>th</sup> century, to a more involved and nurturing father (Draper, 2003;

Flood, 2003; Lamb, 2010). Consequently, the transition to fatherhood has become more salient when exploring issues relevant to contemporary Western fathers and families (Christiansen & Palkovitz, 2001; Dermott, 2014). The three key stages of the perinatal period – antenatal, labour and birth, and postnatal – represent distinctive transitional phases for men’s psychological wellbeing.

During the antenatal stage, men begin to process the emergence of their fatherhood status, shifting their core identity from partner to parent (Habib & Lancaster, 2006; Strauss & Goldberg, 1999). For some men, this can present difficulties in the partner relationship if there is a discrepancy between expectations and perceived needs (Donovan, 1995). Additionally, a desire to develop an emotional bond with their baby during pregnancy can be in conflict with an expectant father’s sense of unreality, due to feeling disconnected from the physical stages of their partner’s pregnancy (Gage & Kirk, 2002). Several longitudinal studies have described the antenatal stage to be the most distressing of the perinatal stages for men, due to the intense psychosocial reorganisation that occurs during this time (Buist, Morse, & Durkin, 2003; Condon, Boyce, & Corkindale, 2004; Ramchandani et al., 2008). For example, Buist et al. (2003) assessed 225 first-time fathers at mid-pregnancy, late pregnancy, the early postpartum period, and four months postpartum on factors relating to psychological distress (including depression, anger, and anxiety), pregnancy history, marital satisfaction, social support, and gender role stress. Results indicated that the peak period of distress for men was at the first assessment during pregnancy. Gender role stress, measured by a questionnaire assessing perceptions of achieving societal standards of male roles, was significantly associated with this antenatal distress. A limitation to this study was that of the 225 men initially recruited, only 152 remained at the final assessment. Consequently, distressed fathers may have been underrepresented, due to the likelihood that higher levels of distress may have contributed to the attrition.

In a similar longitudinal study, 312 men were assessed at 23 weeks of pregnancy and followed up at 3, 6 and 12 months postpartum on psychological functioning, lifestyle factors and relationship/sexual satisfaction (Condon et al., 2004). Using commonly accepted cut-off

points on the General Health Questionnaire, Mental Health Scale, and the Edinburgh Postnatal Depression Scale (EPDS), the study reported that approximately twice as many men exceeded cut-off scores during pregnancy compared to the postnatal assessments. A decline in relationship/sexual satisfaction during the pregnancy period was noted as a key factor contributing to this distress. Similar to the study by Buist et al. (2003), sample attrition may have resulted in an underreporting of fathers' distress. A population-based study of fathers ( $N = 10,975$ ) by Ramchandani et al. (2008) assessed men at 18 weeks antenatally, and then 8 weeks, 8 months, and 21 months postnatally. The study used the EPDS to assess paternal depression and reported that clinical levels were highest in the antenatal assessment. Together, these studies highlight the importance of considering fathers' mental health before their baby is born.

During the labour and birth phase of the perinatal period, fathers can experience a range of highly intense and mixed emotions, which can range from joy, excitement, pride, and love, to anxiety, fear, horror, and helplessness (Bradley & Slade, 2011; Greenhalgh, Slade, & Spiby, 2000; Hallgreen, Kihlgren, Forslin, & Norberg, 1999). For some fathers, witnessing a traumatic birth can result in lasting negative emotional experiences that can have serious implications for their relationships and families (White, 2007). Some men have described labour and birth as a "transformative experience" (Ledenfors & Berterö, 2016) and that the biological and psychological beginning of fatherhood is the moment their baby is born into the world. For example, in a qualitative, ethnographic study of men's experiences during the perinatal period ( $N = 18$ ), Draper (2003) drew on Ritual Transition Theory to describe how the birth of a man's child represents a significant passage between the ambiguities of pregnancy, to a tangible identification with fatherhood. Similar findings were reported by Longworth and Kingdon (2011), who interviewed 11 fathers during pregnancy and again at one week postpartum. A key theme reported was "fatherhood beginning at birth" (p. 591); fathers described how they transitioned from a sense of disembodiment during pregnancy to connection with fatherhood once their baby was outside of the womb. Although the results of these studies do not generalise to all fathers, the findings represent important



considerations about some fathers' experiences during this perinatal stage.

During the postnatal stage, men attempt to make sense of their new father role in a social context. The formation of a triadic family relationship can present several challenges. For example, balancing the demands of work with new responsibilities at home can result in some fathers feeling torn between desiring increased participation in early caregiving tasks, and providing for the family (Cooklin et al., 2015). The experience of fatigue can be a significant challenge for new fathers; having been associated with irritability and low mood, interpersonal difficulties, decreased tolerance and patience with children, and increased difficulties concentrating at work (Giallo, Rose, Cooklin, & McCormack, 2013). Other commonly cited difficulties that fathers report during the postnatal stage include adapting to the presence of an infant who demands significant attention from the mother (Bartlett, 2004), low perceived competence in infant care skills (Buist et al., 2003; Henderson & Brouse, 1991; Kowlessar, Fox, & Wittkowski, 2015), difficulty adjusting to a restricted sense of free time to pursue social friendships and hobbies (Buist et al., 2003; Condon et al., 2004), and frustration with a decline in sexual activity with their partner (Baafi, McVeigh, & Williamson, 2001; Williamson, McVeigh, & Baafi, 2008). Men's vulnerability to experience mental health problems may increase during the perinatal period due to additional demands on their psychological resources during this time. As such, research pertaining to the prevalence of fathers' perinatal mental health issues is considered next.

### **Prevalence of fathers' perinatal mental health issues**

Data from the 2007 *Australian National Survey of Mental Health and Wellbeing* (Australian Bureau of Statistics, 2007) reported that fathers of infants and young children were 1.38 times more likely to experience psychological distress compared to the general population of Australian adult males, including fathers of older children. Furthermore, a number of reviews and meta-analyses have been conducted on the prevalence of paternal perinatal mental illness (e.g. Ballard & Davies, 1996; Bartlett, 2004; Bradley & Slade, 2011; Edward, Castle, Mills, Davis, & Casey, 2015; Goodman, 2004; Paulson & Bazemore, 2010;

Schumacher, Zubaran, & White, 2008; Spector, 2006; Wee et al., 2013; Wee, Skouteris, Pier, Richardson, & Milgrom, 2011). The predominant focus of this research has been fathers' perinatal depression. A meta-analysis of articles involving 28,004 fathers across 43 studies from a range of developed countries reported that between the first trimester and 1 year postpartum, the prevalence of fathers' perinatal depression was 10.4% (Paulson & Bazemore, 2010). A systematic review of 20 studies reported that among men whose partners experience perinatal depression, the reported prevalence of fathers' perinatal depression ranges from 24-50% (Goodman, 2004).

These rates need to be interpreted with caution however, due to several methodological limitations. For example, the reviews draw on studies with small sample sizes of fathers. Additionally, varied measures of depression are used across studies, which make it difficult to synthesize results. It has been argued that the manifestation of depression in men can differ from women (Brownhill, Wilhelm, Barclay, & Schmied, 2005; Šagud, Hotujac, Mihaljević-Peleš, & Jakovljević, 2002), which may not be recognised by current diagnostic systems. For example, men are less likely to report mental health concerns or may express their distress under the guise of behaviours such as risk-taking, alcohol use, aggression, or overworking (Call & Shafer, 2015; Condon et al., 2004). Fathers' depression may therefore be under-reported. Furthermore, these reviews only report cross-sectional prevalence rates, providing little information about how fathers' distress changes across the perinatal period.

A small number of recent population-based studies have sought to address some of these limitations. In a study by Ramchandani et al. (2008), a nationally representative sample of British men ( $N = 10,975$ ) participating in the Avon Longitudinal Study of Parents and Children (ALSPAC) were assessed at four time points throughout pregnancy and the postnatal period. Using the EPDS to assess paternal depression, the study reported clinically significant levels of 3.9% of men at 18 weeks antenatal, 3.6% at 8 weeks postnatal, 3.4% at 8 months postnatal, and 3.9% at 21 months postnatal. A strength of this study was the assessment of fathers during pregnancy, as well as the postnatal period, enabling a comparison of depression levels across all stages of the perinatal period. A study by Giallo et

al. (2012) drew on data from the Longitudinal Study of Australian Children (LSAC) to explore the prevalence of mental health difficulties of a nationally representative sample of Australian fathers ( $N = 3,471$ ) of children aged 0-5 years. Fathers were assessed at three time points – when their children were 0-12 months, 2-3 years, and 4-5 years. The results indicated that approximately 9% of fathers reported clinical levels of psychological distress at each time point, measured by the Kessler-6, a scale that examines behavioural, emotional, cognitive and psychophysiological distress. In another study utilizing LSAC data, Giallo, D'Esposito, Cooklin, Christensen, and Nicholson (2014) used latent growth modelling to explore the trajectory of fathers' ( $N = 2,470$ ) distress over 7 years postnatally. The results reported that fathers experienced the highest levels of distress symptoms during the first 12 months postpartum. A limitation with LSAC is that antenatal data are not available, so fathers' psychological wellbeing prior to having a baby was not assessed. Despite this, the findings are notable in these studies, given the large sample sizes and the utilisation of complex, longitudinal designs.

Perinatal anxiety has only recently become a research focus and a small body of literature suggests that across the perinatal period, fathers are more likely to experience anxiety related disorders than mood disorders like depression (Condon et al., 2004; Field et al., 2006; Luoma et al., 2013; Matthey, Barnett, Howie, & Kavanagh, 2003). A recent systematic review of the prevalence and course of perinatal anxiety disorders in men was conducted by Leach et al. (2016). Across 43 studies, anxiety rates were between 4.1% and 16% during the antenatal period, and 2.4% to 18% during the postnatal period. The data from this review suggested that men's perinatal anxiety is fairly stable across the perinatal period, with potential decreases during the postpartum period.

Far less research has investigated fathers' perinatal mental health issues other than depression and anxiety. Bradley and Slade (2011) conducted a review on the range, prevalence and predictors of fathers' perinatal mental health problems such as Obsessive Compulsive Disorder (OCD) Post-Traumatic Stress Disorder (PTSD), schizophrenia, and bipolar disorder. The authors reported that new fathers may experience OCD symptoms in

the context of fears for their children. Additionally, men who witness childbirth may later experience intrusive thoughts and images as well as symptoms of hyperarousal, which are aligned with PTSD criteria. The review reported limited evidence regarding risk factors associated with men developing postnatal bipolar disorder or psychosis. Overall, the authors reported that studies on mental health problems other than depression and anxiety are limited, with most reports identified being old, with limited sample sizes and often a reliance on clinical observations rather than standardised assessments.

There has been a recent call for perinatal research to also consider the prevalence and impact of mental health concerns such as fatigue and stress on fathers. For example, a study by Cooklin et al. (2012) investigated the relationship between fatigue and parenting strategies in a community sample of parents of children aged 0-5 years, which included 154 fathers. The study reported higher fatigue to be associated with lower parental competence, higher levels of parenting stress, and more irritable interactions between father and child. The study highlighted several risk factors associated with fatigue, such as ineffective coping styles, unrealistic expectations about sleep, behavioural disengagement, and self-blame, which indicated opportunities for intervention and support for parents. A recent qualitative study further explored fathers' experiences of fatigue via focus groups with a sample of parents (fathers  $N = 6$ ) of children aged 0-6 years (Giallo, Rose, et al., 2013). The participants described unrelenting physical and cognitive symptoms of fatigue. Fathers described the negative impact of fatigue on their paid employment and its interference with family life, including increased irritability and anger. Finally, a study by Giallo, Cooklin, Zerman, et al. (2013) assessed the mental health of 144 fathers admitted to a residential parenting service for early parenting difficulties. The study reported that 17% of fathers were experiencing clinical levels of stress. High levels of fatigue symptoms were also common in this sample, which were closely related with symptoms of depression, anxiety and stress. Together, these studies highlight the need for the assessment of a broad range of mental health symptoms in expectant and new fathers.

Overall, the literature indicates that fathers have comparable rates of mental health difficulties to mothers in the perinatal period. Additional research is needed to understand the prevalence of mental health issues in fathers other than depression and anxiety. In particular, it is critical for future research to use various measures of emotional distress, in order to capture the variety of ways in which fathers experience different mental health issues. Understanding what factors may contribute to fathers' mental health difficulties during the perinatal period is also important. Key studies with this focus will be reviewed in the next section.

### **Risk factors associated with fathers' perinatal distress**

Numerous risk factors associated with fathers' perinatal distress have been described in the literature. A history of depression, anger or anxiety in fathers prior to the transition to fatherhood has been moderately associated with mental health difficulties during the perinatal period (Buist et al., 2003; Habib, 2012; Ramchandani et al., 2008). Several reviews and meta-analyses have reported maternal depression to also have a moderate to strong association with fathers' perinatal distress (most commonly depression), followed closely by the quality of the partner relationship (Goodman, 2004; Paulson & Bazemore, 2010; Schumacher et al., 2008; Spector, 2006; Wee et al., 2011). Additionally, reviews have reported that fathers who perceive there to be significant changes in the couple relationship may be more negative about their role as a father, and consequently exhibit more problems adjusting to the changes brought about during the perinatal period (Genesoni & Tallandini, 2009). Morse, Buist, and Durkin (2009) reported that men can experience higher levels of gender role stress (which encompasses fear of performance failure as a father) if their partners are distressed. Subsequently, gender role stress has been described as a risk factor for fathers' perinatal distress (Buist et al., 2003; Galasinski, 2013; Morse et al., 2009). A recent report by beyondblue (2015) indicated that 79% of expectant and new fathers agreed they "need to be the rock" for their family, and 47% of these men felt that this expectation causes them significant stress and anxiety. Galasinski (2013) reported that a sense of

paternal inadequacy, the feeling of not fulfilling perceived responsibilities such as being the key breadwinner, was significantly associated with fathers' mental health issues. Relatedly, a study by Condon et al. (2004) suggested that many men lack positive father role models, due to being brought up at a time when it was less common for their fathers to be involved during birth and early child-rearing. This may also contribute to gender role stress in expectant and new fathers, which in turn, can make men vulnerable to mental health issues. This idea was echoed in a study by Madsen (2009), who asked 41 first-time and second-time expectant fathers to describe their own fathers. The majority of men stated that they did not have a positive father role model to draw on as they embarked on their own journey of parenthood, which consequently impacted their emotional wellbeing.

Infant related problems are other commonly cited correlates of fathers' perinatal distress. For example, premature birth resulting in infants requiring neonatal intensive care can, understandably, negatively impact fathers' wellbeing (Carter, Mulder, Bartram, & Darlow, 2005). Child sleep issues significantly contribute to fathers' experiences of fatigue, which has been associated with perinatal distress (Corwin, Brownstead, Barton, Heckard, & Morin, 2005; Martin, Hiscock, Hardy, Davey, & Wake, 2007).

Social-environmental factors such as low levels of father inclusive practice, poor workplace flexibility, and poor social support can also impact fathers' perinatal mental health (Bolzan, Gale, & Dudley, 2005; Cooklin et al., 2015; Fletcher, May, St George, Stoker, & Oshan, 2014; Spector, 2006; Wee et al., 2011). Poor workplace flexibility is particularly pertinent when considering fathers' perinatal mental health. For example, in a study of 3,219 fathers of children aged 0-12 months, Giallo, D'Esposito, et al. (2013) reported that fathers with perceived low job quality (e.g., lack of control over work hours, poor job security) had five times the likelihood of reporting psychological distress compared to fathers who reported higher job quality. Fathers in low quality jobs are more likely to experience work-family conflict, which is associated with higher levels of family stress and increased risks to fathers' mental health (Allen, Herst, Bruck, & Sutton, 2000; Cooklin et al., 2015; Giallo, D'Esposito, et al., 2013). The various psychosocial risk factors for fathers' perinatal mental health problems

highlight the importance of including fathers in family research. Potential short and long term impacts of fathers' perinatal mental health issues also support this point; these are reviewed next.

### **Short and long term impacts of fathers' perinatal mental health issues**

Fathers' perinatal distress can have a significant impact on themselves, their family, and the overall health care system. For example, fathers' psychological distress has been associated with less involvement in antenatal appointments, less responsiveness to infant behaviour, less involvement in child caregiving tasks, and increased instances of impaired parenting (Giallo, D'Esposito, et al., 2013; Kane & Garber, 2004; Nicholas et al., 2012). This can result in impaired infant development (Kaplan, Sliter, & Burgess, 2007; Murray & Cooper, 1997) and compromised family relationships (Don & Mickelson, 2012; Goodman, 2004; Hedin, 2000; Ramchandani et al., 2008).

Fathers' perinatal depression has been extensively studied in the context of short and long-term impacts on child outcomes. Meta-analyses indicate that fathers' perinatal depression is strongly associated with emotional and behavioural problems in children, from infancy to middle childhood (Connell & Goodman, 2002; Kane & Garber, 2004). Several recent population-based longitudinal studies have also confirmed this finding. For example, in a study of 8,431 fathers participating in the ALSPAC study, fathers' postnatal depressive symptoms were associated with adverse emotional and behavioural outcomes in children at age 3 and 7 years (Ramchandani, Stein, Evans, & O'Connor, 2005; Ramchandani et al., 2008). Notably, these effects remained significant even after controlling for mothers' postnatal depression and fathers' concurrent depression. Similar findings were reported in a study with 2,620 fathers from two-parent families participating in LSAC (Fletcher, Feeman, Garfield, & Vimpani, 2011; Giallo, Cooklin, Wade, D'Esposito, & Nicholson, 2013). Research has also indicated that children whose fathers have perinatal depression are at an increased risk of developing various mental health disorders themselves. For example, in the ALSPAC study conducted by Ramchandani et al. (2008), a significant association was found between

fathers who had postnatal depression and psychiatric disorders in their children at age 7 years. These associations can remain strong even if fathers only experience depression for a short time (Kvalevaag et al., 2014; Ramchandani et al., 2008).

Research on the impact of fathers' perinatal anxiety on children is gaining increasing attention in the literature. A small number of studies have reported that children are at a greater risk of developing anxiety disorders if their fathers experience anxiety disorders themselves (Beidel & Turner, 1997; Bögels & Phares, 2008; Cooper, Fearn, Willetts, Seabrook, & Parkinson, 2006). A review paper on fathers' roles in the etiology, prevention, and treatment of child anxiety suggested that a father's role in the socialisation of his children may have a greater effect on levels of children's social anxiety, compared to mothers (Bögels & Phares, 2008).

As well as having significant impacts on the family system, fathers' perinatal distress is associated with increased economic costs such as access to primary care, psychologist and allied health contacts, mental health groups, medications, the utilization of both inpatient and outpatient hospital services, and community services (Edoka, Petrou, & Ramchandani, 2011; Post and Antenatal Depression Association, 2012). In 2012, fathers' perinatal depression was estimated to cost the Australian health care system \$18M (Post and Antenatal Depression Association, 2012). When indirect costs are incorporated such as lost work productivity, informal care, and costs to the community, the cost of fathers' perinatal depression to the wider economy has been estimated to be \$262M per year (Post and Antenatal Depression Association, 2012). An increasing body of research suggests that paternal mental health issues in the perinatal period are currently under-screened, under-diagnosed, and under-treated (Edward et al., 2015; Musser, Ahmed, Foli, & Coddington, 2013). Therefore, current estimates are likely to be lower than the true economic burden. Paternal mental health issues are also associated with a higher risk of socio-economic disadvantage for families (Eaton, Muntaner, & Sapag, 1999; Murali & Oyeboode, 2004), due to mental illness compromising men's abilities to obtain and/or maintain employment (Ramchandani & Psychogiou, 2009).



Overall, a key focus of this body of literature is the influence of fathers' perinatal mental health to their children's wellbeing. In recent years, this information has led researchers to progress from exploring basic associations between fathers' perinatal mental health and child outcomes to focusing on the mechanisms by which fathers' mental health problems impact children. The next section will review the literature that examines potential underlying mechanisms.

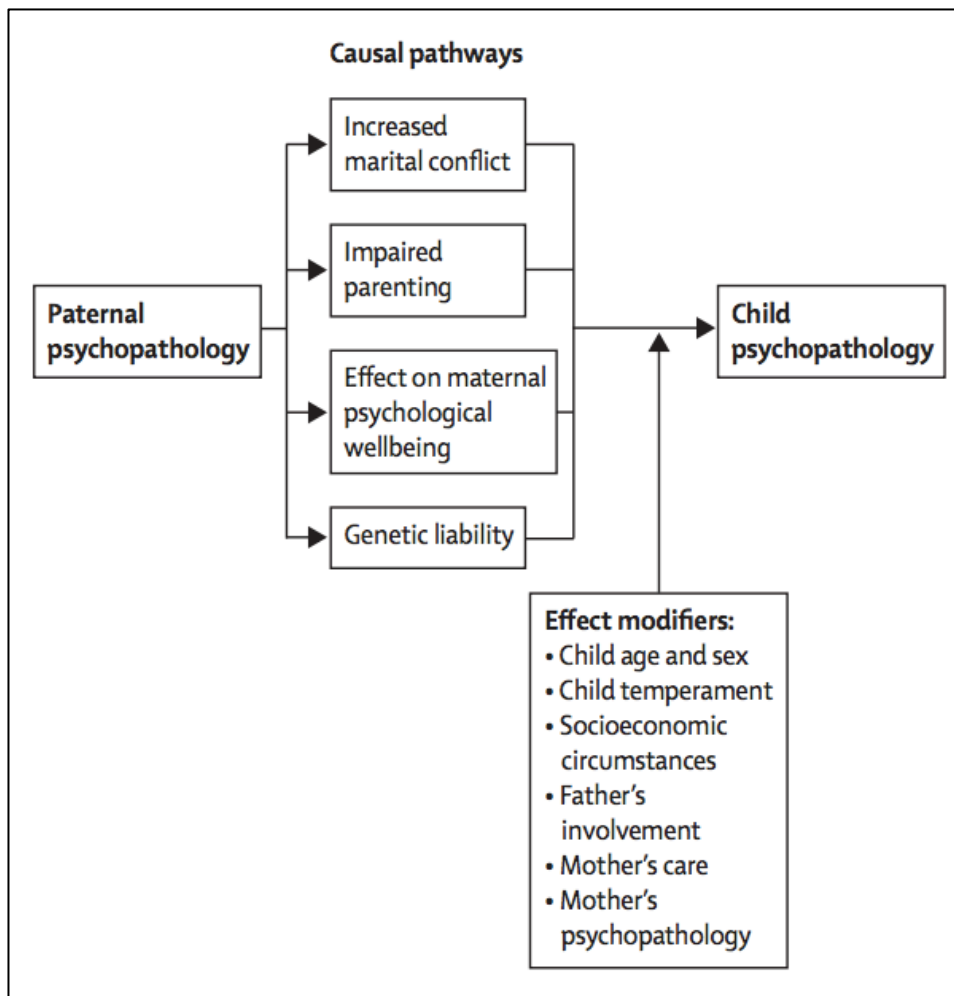
### **Mechanisms linking fathers' perinatal mental health and child outcomes**

A theoretical model proposed by Goodman and Gotlib (1999) suggested that children can be influenced by their mothers' mental health in several ways, including genetic inheritability, dysfunctional neuro-regulatory mechanisms, modelling of negative cognitive processes, impaired parenting behaviour and the quality of care provided to children, and indirect negative effects via stress in the family environment. Ramchandani and Psychogiou (2009) adapted this model (Figure 2.1) to represent mechanisms of risk transmission from fathers to their children.

Ramchandani and Psychogiou (2009) proposed three categories of mechanisms of risk transmission: "genetic, environmental and gene-environment interplay" (p. 648). Genetic pathways as a mechanism that link paternal mental illness to child outcomes are complex (Rutter, Moffitt, & Caspi, 2006; Sullivan, Daly, & O'Donovan, 2012). Genes have variable transmission effects specific to the psychological disorder. For example, research has reported that compared to depressive disorders, bipolar disorder and schizophrenia are significantly more heritable (Sullivan et al., 2012).

Beyond genetic risks, particular environmental mechanisms can link paternal mental illness to their children. For example, maternal psychological wellbeing can be compromised by paternal mental illness (Field et al., 2006; Ramchandani & Psychogiou, 2009). This can negatively impact the co-parenting relationship, resulting in increased marital conflict and impaired parenting capacity (Pilkington, Milne, Cairns, Lewis, & Whelan, 2015). Marital conflict has been reported to mediate the relationship between some parental mental health

disorders and children's development (Hanington, Heron, Stein, & Ramchandani, 2012; Kane & Garber, 2004; Leinonen, Solantaus, & Punamäki, 2003).



**Figure 2.1.** Proposed mechanisms of risk transmission from fathers to children (Ramchandani & Psychogiou, 2009).

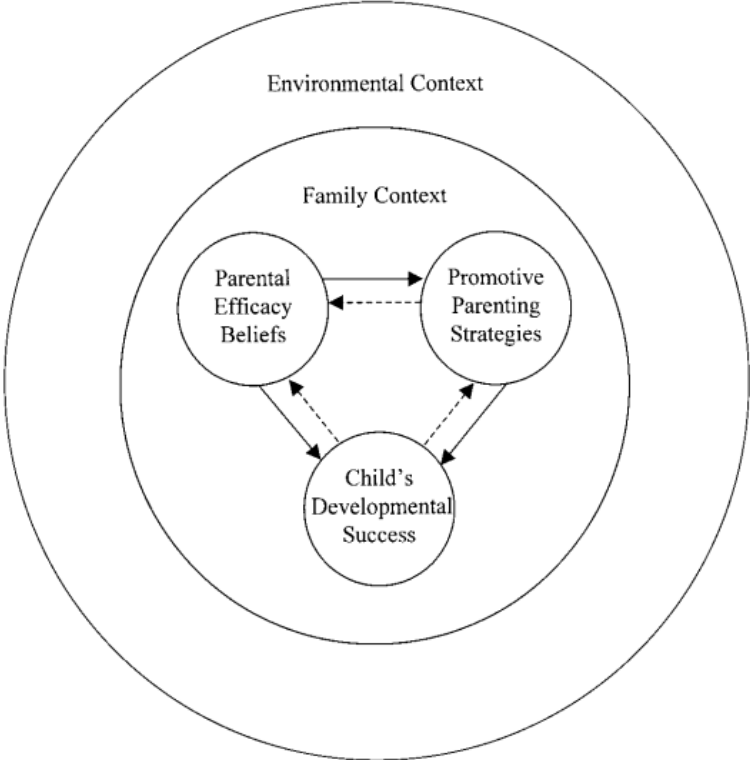
Parenting behaviour as a mechanism that may transmit paternal mental illness to children has attracted the most attention in the literature (Beardslee, Gladstone, & O'Connor, 2011; Wilson & Durbin, 2010). Parenting behaviour is a key aspect in a number of theoretical models used to understand child development, such as attachment theory, object relations, and family systems theory (Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007). With respect to fathers, there has been a particular focus on the relationships between depression and parenting behaviour (Kane & Garber, 2004; O'Hara & Fisher, 2010; Wilson & Durbin,

2010). For example, in a study of 330 fathers of children aged 10-15 years, Elgar et al. (2007) reported that over a two-year period, fathers' levels of parental nurturance, rejection, and monitoring significantly mediated the relationship between fathers' depressive symptoms and child adjustment problems. In a larger study utilising LSAC data, Giallo, Cooklin, Wade, et al. (2013) reported that the relationship between fathers' ( $N = 2,025$ ) postnatal distress and child emotional-behavioural outcomes when their children were aged 4-5 years was mediated by parenting hostility, characterised by angry and frustrated behaviour towards the child. These studies suggest that depressive symptoms can interfere with fathers' capacities to be nurturing and warm, as well as to show firm and consistent discipline (Elgar et al., 2007; Giallo, Cooklin, Wade, et al., 2013). Paternal depression has also been associated with rejection of the child, more psychological control, and negative and critical speech (Sethna, Murray, & Ramchandani, 2012). Meta-analyses and reviews of this literature have reported that these parenting behaviours are strongly predictive of adjustment difficulties in children (Beardslee et al., 2011; Kane & Garber, 2004; Wilson & Durbin, 2010).

Closely related to the mechanism of parenting behaviour is parenting self-efficacy (PSE), a construct that refers to parental attitudes and beliefs about competency as a parent. According to the model of efficacy developed by Bandura (1986), several factors influence one's perceptions of efficacy. The strongest is performance attainment, such that behaviour resulting in successful completion of a task enhances confidence in one's ability. In a conceptual model of PSE and parenting behaviour, Ardel and Eccles (2001) theorized that parents with higher PSE are more likely to demonstrate positive parenting strategies, which in turn increases the prospects of their children's developmental success. Children's success can also be impacted by PSE through parental modelling of attitudes and beliefs (Figure 2.2).

This model has been supported by comprehensive descriptive reviews that report high PSE to be associated with parents' use of a range of optimal parenting strategies across the childhood period including parental sensitivity and responsiveness to children's needs (Teti & Gelfand, 1991), as well as warm and affectionate parenting behaviour and monitoring (Coleman & Karraker, 2000; Jones & Prinz, 2005). In addition, the model by Ardel and

Eccles (2001) describes how there can be reverse effects. For example, parents experiencing lower PSE may find it challenging to consistently use positive parenting strategies when difficulties with their children arise. In turn, they may give up more easily, which can confirm their beliefs of low PSE. Reviews have shown that low levels of PSE have been associated with hostile parenting or coercive discipline (Coleman & Karraker, 2000; Jones & Prinz, 2005). Given the strong link between PSE and parenting behaviour, additional research on these factors in the context of transmission risks to child outcomes is needed, particularly in relation to fathers' perinatal mental health.



**Figure 2.2.** Conceptual model of the reciprocal relationship between parental self-efficacy beliefs, promotive parenting strategies, and the child's developmental success (Ardelt & Eccles, 2001).

The final mechanism of risk proposed by Ramchandani and Psychogiou (2009) is "gene-environment interplay". Individual genetic or environmental factors alone are insufficient for understanding the familial transmission of fathers' perinatal distress. This is

reflected in the “effect modifiers” component of the model, which lists several factors that moderate the relationship between paternal and child psychopathology. For example, infant temperament can influence the extent to which children are impacted by paternal mental illness (Belsky, 2013). Additionally, a difficult infant temperament may interact with paternal distress to influence parenting behaviour. In turn, this could lead to more negative outcomes for the child (Fields, Cole, & Maggi, 2016; Potapova, Gartstein, & Bridgett, 2014). Research has reported that compared to girls, boys seem to be more vulnerable to the effects of their fathers’ depression (Ramchandani et al., 2005). One potential explanation for this is that fathers may identify more closely with a child of the same sex, resulting in increased time spent with sons compared to daughters (Lamb, 2010). This differential exposure could contribute to an increased risk for boys whose fathers experience psychological distress, compared to girls. Socio-economic status is also an important “effect modifier” as population-based studies have shown that the prevalence of paternal mental health problems increases with socioeconomic disadvantage (Giallo et al., 2012; Ramchandani et al., 2008).

In summary, understanding the mechanisms by which paternal psychopathology can be transmitted to children is a critical area of research. In particular, some mechanisms represent potentially modifiable factors that can inform the development of intervention approaches to minimize the impact of fathers’ mental health difficulties on parent-child relationships and children’s functioning.

## **Summary**

The literature on the prevalence of fathers’ perinatal mental health issues, associated risk factors, short and long-term impacts, and transmission mechanisms is growing. The overarching message that can be drawn from the research to date is that fathers’ perinatal mental issues are a significant individual and family issue, as well as public health care concern. Therefore, the need for supporting fathers during this time is clear.

## **Chapter 3: Supports and Interventions for Father's Perinatal Mental Health**

### **Overview**

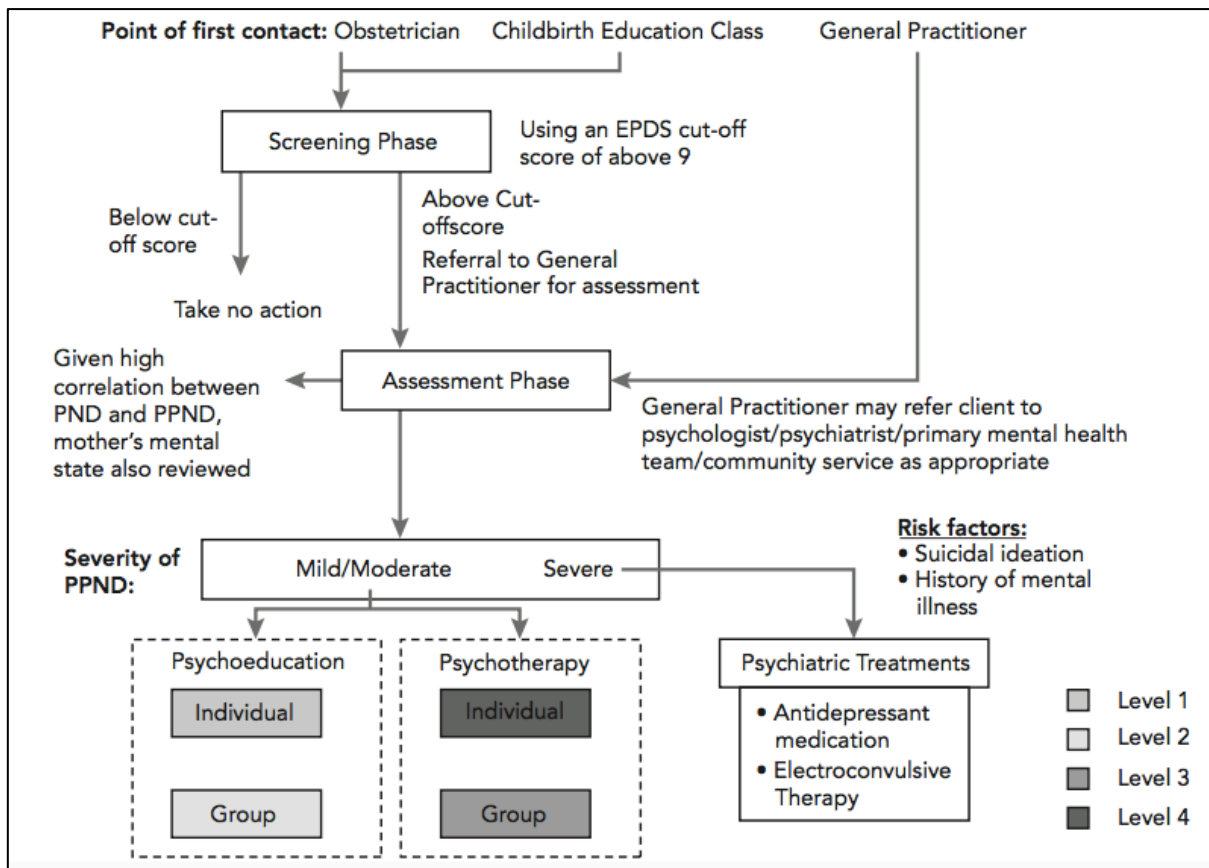
The previous chapter reviewed key issues associated with fathers' perinatal mental health, and highlighted the importance of supporting fathers during this significant life stage. Subsequently, this chapter reviews issues related to supports and interventions for fathers' perinatal mental health, such as the current status of interventions for fathers and the challenges of engaging fathers in services during the perinatal period.

### **Perinatal interventions for fathers' mental health**

The prevalence rates and impacts of fathers' perinatal mental health problems highlight that the provision of interventions to support fathers' mental health is essential, and research is beginning to emerge in this area. For example, a multi-level intervention model for fathers experiencing perinatal depression (Figure 3.1) was proposed by Habib (2012). The model recognises that a universal intervention modality will not meet the needs of all fathers. Subsequently, a stepped care model is recommended, whereby the intervention is tailored so that the level of support provided matches a father's specific needs. For example, for mild to moderate levels of perinatal depression, psychoeducation in the form of web-based parenting information and father-specific classes, as well as individual and/or group psychotherapy can be offered. For severe perinatal depression, referral for psychiatric assessment may be likely, with a view to incorporate psychopharmacological approaches into a treatment program.

The development of this model offers substantial contribution to the knowledge base regarding supports and interventions for fathers' perinatal mental health, as it acknowledges the importance of screening fathers for perinatal depression and providing a range of intervention options. However, there are several limitations. First, the development of the model was guided by empirical evidence regarding psychological treatments of mothers with perinatal depression, and so the model is speculative about interventions for fathers'

perinatal depression. Second, with a sole focus on perinatal depression, other significant mental health complaints for fathers in the perinatal period, such as anxiety and stress, are not considered. Although proposed models of intervention and care are vital, there is a significant gap in the literature regarding the evaluation of intervention programs.



**Figure 3.1.** A schematic diagram of the suggested paternal perinatal depression intervention model (Habib, 2012).

Most intervention studies and many health services aimed at improving mental health in the perinatal period have targeted mothers; consequently, information on the effectiveness of these interventions are mother focused (Dennis & Hodnett, 2007; Pilkington, Milne, et al., 2015). Previous review papers on interventions for fathers have focused on father-infant interactions (Magill-Evans, Harrison, Rempel, & Slater, 2006), or processes to engage fathers in parenting interventions (Panter-Brick et al., 2014). No reviews have been conducted on interventions targeting fathers' mental health in the perinatal period. This is an

important gap to address. Therefore, one of the studies conducted in this PhD was a systematic review of interventions targeting fathers' perinatal mental health (see Chapter 7).

### **Engaging fathers in perinatal services**

Although interventions targeting fathers' perinatal mental health are important, a broader issue is the engagement of fathers in perinatal health services. Compared to women, it has been reported that Australian men are less likely to utilize parenting support services (see review by Fletcher, Silberberg, & Baxter, 2001). Some authors have suggested that similar to men experiencing distress in general (Wilhelm, 2009), discussing and expressing emotions during the perinatal period is a significant challenge for men (Boyce, Condon, Barton, & Corkindale, 2007; Morse et al., 2009). Consequently, it has been reported that fathers with mental health concerns do not adequately engage with health services (Ackerson, 2003; Berlyn, Wise, & Soriano, 2008; Fletcher et al., 2012; Maxwell, Scourfield, Featherstone, Holland, & Tolman, 2012).

Several socio-cultural factors influence men's reluctance to access mental health related services during the perinatal period. For example, the socialisation of gender roles – social behaviour templates to which people are expected to adhere – plays a significant part in help-seeking behaviours (Addis & Mahalik, 2003; Mansfield, Addis, & Mahalik, 2003). Fathers may perceive help-seeking as challenging conventional ideas of masculinity, which include self-reliance, toughness, and an emphasis on emotional control (Levant, 2011). A literature review of men and help-seeking behaviour reported that this is of particular relevance to Caucasian middle class men (Galdas, Cheater, & Marshall, 2005). As such, “new fatherhood” has been described as an important phase to consider in the study of masculinity (Madsen, 2009). An additional socio-cultural factor impacting fathers' help seeking behaviour is a service culture that can exclude fathers due to the traditional role of women as primary carers of children (Alio et al., 2011; Fletcher et al., 2012; Whitelock, 2016). Consequently, barriers to father engagement in the perinatal period include health professionals' lack of skill and confidence to engage men about their mental health, limited



occasions for fathers to relate to other males, a focus on medical information pertaining to the mother and baby, information not being presented when most needed, and an inflexibility of service formats (Alio et al., 2011; Bayley, Wallace, & Choudhry, 2009; Berlyn et al., 2008; Fletcher et al., 2014; Panter-Brick et al., 2014; Polit & Beck, 2008; Wilhelm, 2009).

### ***Fathers' support needs***

The interaction between fathers' limited help-seeking behaviours and barriers to fathers engaging in perinatal services is problematic. One way to address this is for research to explore fathers' perinatal support needs in order to facilitate their engagement in appropriate services. There have been calls for in-depth, qualitative interview approaches in father research, to develop a richer understanding of men's experiences (Marsiglio, Amato, Day, & Lamb, 2000). Despite this, only a small number of qualitative studies have investigated aspects of fathers' support needs. For example, an English study by Deave and Johnson (2008) explored first-time fathers' ( $N = 20$ ) experiences of the antenatal care, support, and education provided by healthcare professionals. Perceived lack of support mechanisms, a desire to be more involved, and the need for more information pertaining to parenting strategies, infant care and relationships were identified as key themes from the fathers. The authors recommended that similar research be conducted in other countries to provide a foundation for understanding the needs and experiences of expectant and new fathers from an international perspective.

In another study focusing on the antenatal period and birth, Poh, Koh, Seow, and He (2014), interviewed first-time fathers ( $N = 16$ ) in Singapore about their experiences and needs. The fathers described how cultural practices (e.g., not sharing the news of a pregnancy until a particular gestation period) and modifying daily routines were effective in dealing with pregnancy changes and supporting their partners. The study highlighted how more timely, empathic, and professional care was needed from health professionals to better support fathers during pregnancy and childbirth. In another study, Widarsson, Kerstis, Sundquist, Engström, and Sarkadi (2012) described the support needs of expectant parents ( $N = 22$  women,  $N = 10$  men) living in Sweden. The expectant mothers and fathers

expressed satisfaction with the medical support they had received, but both groups described a lack of psychosocial and emotional support from antenatal services. Some fathers described feeling “invisible” and expressed a desire to be more involved, including during ultrasound appointments and conversations with midwives. One limitation of this study was that the expectant couples were interviewed together, which may have limited the opportunities for men to disclose more specific support needs related to their role as a father.

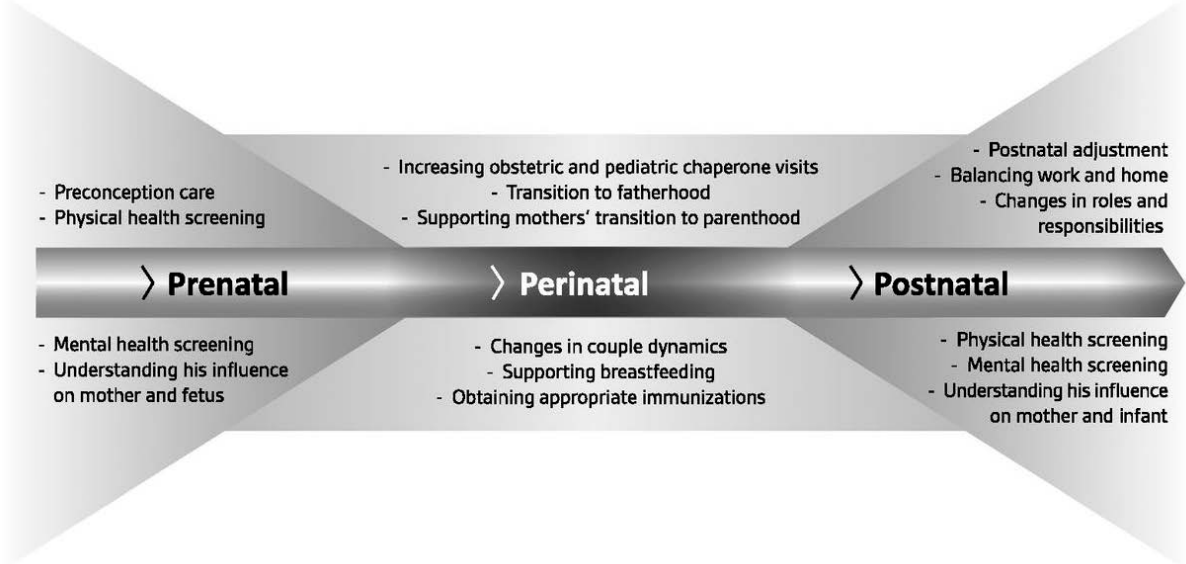
Rowe, Holton, and Fisher (2013) addressed this limitation by conducting single sex discussion groups with Australian men and women expecting their first baby, enquiring about anticipated support needs and preferred sources of information for mental health. The men ( $N = 16$ ) identified their partners, close friends, and relatives as confidants for their emotional needs. Fathers expressed uncertainty regarding the mental health qualifications of some health professionals, which contributed to their reluctance to discuss their emotional needs. The fathers described wanting to be recognised as parents, be involved, and learn new skills, but felt that their needs were not prioritised in existing models of healthcare. Fathers were unanimous in their belief that their baby and partner’s needs came before their own. Even so, they stated that this should not translate to fathers being marginalised and demeaned by health services. One limitation to this study is that the group interview format may have been a barrier to disclosing sensitive information, particularly relating to mental health (Fletcher et al., 2014). Exploring support needs through individual interviews with fathers may facilitate greater self-disclosure.

The predominant focus of these studies was with fathers in the antenatal period. Further research is needed on fathers’ support needs across all stages of the perinatal period in order to gain insight into their help-seeking preferences. In turn, this information can inform primary care services about how to best address the barriers that fathers experience in accessing support.

### ***The role of primary care***

In early 2015, the World Health Organisation (2015) declared that engaging with fathers and families should be a priority for all maternal and newborn health services around

the world. In line with this, a small number of studies have explored how primary health services can better respond to the needs of fathers. For example, a model created by Garfield (2015) conceptualises the transition to fatherhood as a timeline spanning the entire perinatal period, and highlights several intervention and support opportunities for primary health care services (Figure 3.2).



**Figure 3.2.** Conceptualization fathers' involvement in health services from preconception through to the postnatal period (Garfield, 2015).

The model identifies that in the antenatal period, engaging men about their physical and mental health is essential, as they play a central role in the wellbeing and care of the mother and foetus. During pregnancy and the early parenting period, men often increase their exposure to the health care system as chaperones to obstetric and paediatric appointments. During these times, health care professionals have several opportunities to engage fathers in terms of their mental health, changes in the couple dynamic, labour and birth experiences, breastfeeding, the mothers' mental health, and infant care. The postnatal period represents a time of significant social adjustment, as the father is adapting to changes in roles and responsibilities at work and at home. Consequently, it is vital for fathers to be engaged in order to support their mental and physical health, which is a critical component of

the psychological, physical, and economic wellbeing of the family system (Goodman, 2004). Research has indicated that positive and authentic engagement from maternity care services, that recognises the important role of fathers in transition to parenthood, has the potential to increase fathers' trust, decrease fear, and increase the chance of men seeing themselves as valued co-parents (Ledenfors & Berterö, 2016; Steen, Downe, Bamford, & Edozien, 2012).

To facilitate the application of models such as the one developed by Garfield (2015), research on strategies for primary care services to engage fathers across the different stages of the perinatal period is vital. One example is a report by Berlyn et al. (2008), which outlined six key strategies for primary health care services to improve engagement with a father client group: 1) policy and training; 2) professional attitudes and staffing; 3) adopting a strengths-based approach; 4) making services male friendly; 5) raising awareness; and 6) assessment and evaluation. Following this report, a resource titled the *Father-inclusive practice guide* was produced by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA, 2009), designed to facilitate a holistic approach to including fathers in service delivery. The guide outlines eight areas that family services need to consider when approaching father-inclusive practice: 1) assessment of current father engagement; 2) vision of improvement; 3) goal setting; 4) strategies; 5) targeting the right audience; 6) staff knowledge, skills, values, and attitudes; 7) implementation; and 8) ongoing evaluation. Aimed at supporting practitioners, as opposed to a formal report, the guide includes tools and interactive activities for service providers to assist them in the implementation of the material. More recently, a report titled *Engaging fathers: Evidence review* was published by Fletcher et al. (2014), detailing implementation information to support changes in practice to better engage fathers in family services.

Despite the publication of such resources, current research indicates that primary health care based professional guidelines, workshops and seminars on father engagement are sporadic, and that the level of father-focused training among primary health service staff remains low (Fletcher et al., 2014; Zanoni, Warburton, Bussey, & McMaugh, 2013). As such,

additional work is needed in the area of father engagement, including more targeted research on specific primary health care services that provide support to fathers in the perinatal period, in order to facilitate the implementation of father-inclusive strategies.

## **Summary**

In spite of the growing body of knowledge about supports and interventions for fathers' perinatal mental health, much work needs to be done before perinatal services routinely acknowledge the significant role that fathers play in pregnancy, labour and birth, and the early parenting period. In particular, understanding how fathers' help-seeking behaviours interact with barriers in policy, health professional attitudes, and services is critical for the successful dissemination of research on fathers' perinatal mental health.

## **Chapter 4: Research Rationales and Aims**

### **Overview**

Informed by the literature review presented in Chapters 2 and 3, this chapter outlines the rationale and aims for each of the four studies conducted in this program of research.

### **Study 1**

The strong link between fathers' perinatal mental health and later child development and functioning calls for further research on the mechanisms that help to explain this association. A deeper understanding of potentially modifiable mechanisms can help to inform prevention and intervention efforts targeting fathers' perinatal mental health, as well as parenting programs aimed at supporting child outcomes. Parenting behaviour and PSE as transmission factors of mental health have received considerable attention in the literature in the context of mothers. There is an opportunity to contribute to the literature on fathers' perinatal mental health by exploring how these factors are associated with fathers' mental health and child outcomes. Therefore, the aim of Study 1 was to examine the association between fathers' mental health and PSE in the postnatal period, later parenting behaviours when children are aged 4-5 years, and emotional-behavioural outcomes for children aged 8-9 years.

### **Study 2**

Fathers' perinatal mental issues are a significant public health care concern. Therefore, interventions to support fathers' during this period are critical. In order to inform the development of future resources, programs and services for fathers, a knowledge audit is needed of published interventions targeting fathers' perinatal mental health. Therefore, the aim of Study 2 was to conduct a systematic literature review to identify the current status of father-focused interventions in the perinatal period and to assess their effectiveness in preventing and treating fathers' perinatal mental health issues.

### **Study 3**

Investigation into fathers' support needs is required, particularly across the perinatal period. Such information will contribute to the knowledge base about fathers' help-seeking behaviours, and is critical for informing policy, health care services, and resources targeting fathers' perinatal mental health. Despite calls for in-depth, qualitative interview approaches in father research, there is limited qualitative research focusing on the support needs of fathers. The exclusion of such narratives in the literature constitutes a significant gap when considering how to best support fathers in the perinatal period. Therefore, the aim of Study 3 was to describe expectant and new fathers' perceived support needs regarding their mental health and parenting during pregnancy and the early parenting period via individual, qualitative interviews.

### **Study 4**

In order to improve father engagement and father-inclusive practice in primary care settings, research is needed on specific primary health care services that provide support to fathers in the perinatal period. As identified by several authors (Berlyn et al., 2008; Fletcher et al., 2014), a key strategy to inform the improvement of father-inclusive practice is to survey staff attitudes and experiences. Midwives are ideally placed within healthcare systems to engage fathers and promote father-inclusive practice, as they have several opportune moments across the perinatal period where they are likely to have contact with men. To the best of our knowledge, no studies have been conducted that focus on midwives' experiences working with fathers. Therefore, the aim of Study 4 was to explore midwives' perceptions and experiences of engaging fathers in the perinatal period.

## Chapter 5: Methodological Rationale

### Overview

This chapter outlines the methodological approach selected to meet the aims of this program of research. A multi-method approach was adopted across four studies, incorporating secondary analyses of data from a longitudinal study, a systematic literature review, qualitative interviews, and an online survey. Procedural detail is provided in the methods section of each study included as chapters in this thesis, therefore the focus of this chapter is on the underlying methodological rationale for each study, and the key characteristics of each approach.

### Longitudinal design

The aim of the first study was to explore potential transmission factors associated with fathers' postnatal mental health and later child outcomes. To address this, data were accessed from the Longitudinal Study of Australian Children (LSAC). Initiated in 2004, LSAC is the first national study to examine the lives of Australian children and their families at regular intervals across infancy and early and middle childhood. The study is funded as part of the Australian Government's *Stronger Families and Communities Strategy* by the Australian Government department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is being undertaken in partnership with the Australian Institute of Family Studies (AIFS). A nation-wide consortium of expert researchers supports the complex study design and its implementation (Zubrick, Smith, Nicholson, Sanson, & Jackiewicz, 2007). Comprehensive details on the design and sample of LSAC have been published elsewhere (Soloff, Lawrence, & Johnstone, 2005). The LSAC sample is broadly representative of the Australian population. Comparison with data from the Australian Bureau of Statistics (ABS) indicates there are no large differences on most family characteristics (Zubrick et al., 2007). Accessing LSAC data as part of this PhD, therefore, enabled an analysis of a nationally representative sample of over 3,700 adoptive and biological fathers



living with their children. At the time of analysis for Study 1, five biennial waves of data were available.

Longitudinal studies are one of the most comprehensive research approaches with several associated strengths. Most notably, they facilitate the study of intraindividual change, the degree of variability displayed by different individuals on particular variables over time (Ferrer & McArdle, 2010; Schaie, 1983). Consequently, longitudinal studies can detect developments or changes in the characteristics of a target population at both the individual and the group level. The establishment of a sequence of events then becomes possible, making longitudinal studies capable of identifying factors associated with particular outcomes (Ferrer & McArdle, 2010). Longitudinal studies can also identify mechanisms by which particular factors may cause or contribute to the outcomes they predict (Verbeke, Fieuws, Molenberghs, & Davidian, 2014). This can result in important knowledge contributions to clinical and public health practice, particularly when factors are potentially modifiable (Guralnik & Kritchevsky, 2010). These design strengths were all critical considerations when developing the research aims for Study 1. Additionally, a key strength of utilising LSAC data was access to a multivariate domain of variables, which is an important design component of modern developmental psychology research (Ferrer & McArdle, 2010; Verbeke et al., 2014). This aided in developing and testing a theoretical model while controlling for several important covariates. Furthermore, high statistical power was afforded by the large data set.

Conducting analyses on an existing longitudinal data set meant that common limitations of longitudinal study designs such as significant time and monetary investments were avoided. In the context of the research focus of this PhD, the main limitation in using LSAC data was that information pertaining to fathers' mental health prior to the birth of their study child was not available, as the study design did not include the antenatal period. A history of mental health problems is one of the strongest predictors of fathers' postnatal mental health (Buist et al., 2003; Habib, 2012), and so this information would have strengthened the model that was tested. Despite this, the methodological approach to Study

1 still enabled a complex analysis of a large sample size of fathers and their children, and the exploration of long term associations between variables.

### **Systematic literature review**

In order to identify the current status of father-focused interventions in the perinatal period and to assess their effectiveness in preventing and treating paternal mental illness, a systematic literature review was conducted for Study 2. Systematic literature reviews use systematic and explicit research methods to identify, evaluate, and synthesise data from all available studies relevant to a specific research question (Higgins & Green, 2008). A systematic literature review protocol includes a pre-specified search strategy, explicit criteria to include or exclude studies, methods of extracting and synthesising study findings, and established standards to critically appraise study findings (Higgins & Green, 2008). The methodology is clearly outlined, meaning that the literature search can be replicated and/or updated. The review that was conducted for this PhD adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher, Liberati, Tetzlaff, & Altman, 2009). The PRISMA statement provides a checklist and a four-phase flow diagram for authors to use when conducting and reporting their systematic literature review. The review protocol was also registered with the PROSPERO database of systematic reviews (see Appendix E), which contributed to the transparent reporting of the study methodologies.

By synthesising all available literature on a topic, systematic literature reviews can improve the generalisability of findings and allow for the exploration of differences in findings that exist between studies (Mulrow, 1994). Additionally, a clearly reported protocol means that systematic literature reviews have a reduced risk of bias compared to narrative reviews, where authors can selectively include or exclude studies to support a position (Umscheid, 2013). If data presented in primary studies are ambiguous, systematic literature reviews can have a risk of bias if the data extraction and coding is then influenced by the researcher's subjectivity. To address this, independent extraction and coding of the data by at least two

researchers is recommended (Higgins & Green, 2008). Systematic literature reviews can also include a meta-analysis, a statistical procedure for collating data from individual studies to produce a single estimate of effect (Umscheid, 2013). In the systematic literature review conducted in this program of research, the diversity of outcome measures reported in the included studies meant that a meta-analysis could not be conducted; therefore a descriptive approach was used to present the results.

Systematic literature reviews have become an increasingly important resource for clinicians, researchers, funders and policy makers who want to access unbiased information to aid their decision-making (Umscheid, 2013). For example, the synthesised findings of systematic literature reviews can reduce research duplication, identify research gaps and priorities, aid in the dissemination of knowledge to clinicians and the wider community, assist with policy formation, and contribute to the development and provision of resources and services (Mulrow, 1994; Umscheid, 2013). Accordingly, incorporating a systematic literature review as part of this PhD was a key component to addressing part of the overall research aim.

### **Qualitative interviews**

Qualitative interviews were used as a methodology to develop a richer understanding of fathers' support needs in Study 3, and midwives' experiences of engaging fathers in Study 4. There is growing recognition of the need for father-focused research to incorporate qualitative approaches (Berlyn et al., 2008; Fletcher et al., 2014; Marsiglio et al., 2000), particularly if the research aims to contribute to education, the experience of individuals and health care workers, and the development and management of health care services (Banfield, Barney, Griffiths, & Christensen, 2014; Barnard, McCosker, & Gerber, 1999). Qualitative methods refer to a broad class of exploratory research procedures designed to describe the experiences of individuals in particular settings (Denzin & Lincoln, 2005). A key strength of qualitative inquiry lies in its focus on the contexts and meaning of individuals' experiences to inform theory in an inductive fashion (Ponterotto, 2005).

The qualitative approach to Studies 3 and 4 was underpinned by a social constructivist perspective, which is based on the assumption that all individuals have different perspectives about their social world (Burr, 2015). Social constructivism contends that human development and the construction of our knowledge is a collaborative process, occurring in the context of culture and the social sphere. The developmental theories of Vygotsky and Bruner, and Bandura's social cognitive theory closely align with this perspective (Adams, 2006). A social constructivist theoretical position was incorporated into the qualitative methodologies of Studies 3 and 4 as the support needs of fathers in the perinatal period, and midwives' experiences of engaging fathers are highly influenced by the social world in which they exist.

In keeping with the assumptions of the social constructivist framework, no explicit hypotheses guided the data collection for Studies 3 and 4. The interview process was exploratory and reflective, guided by semi-structured questions aimed to assist the participant to reflect on the area of inquiry from his or her own frame of reference. Consistent with recommendations by Barnard et al. (1999), participants were invited to further explain their experiences using examples, in order to make clear their intent and language. Furthermore, the qualitative interview approach called for reflexivity, which recognises that the researcher's experiences, beliefs, and values can influence the design of the research and the analysis of the data gathered. Qualitative research guidelines state that the researcher must regularly and actively reflect on, and be cognizant of their interpretations of the participants and settings being studied (Ponterotto, 2005; Rossman & Rallis, 2012). Guided by Finlay and Gough (2008), reflexivity was addressed in Studies 3 and 4 by the research team, which comprised three females and one male, through a discussion of the impact of researcher context and subjectivity on project design, data collection and data analysis.

For the majority of interviews conducted for Study 3, and for all interviews conducted for Study 4, participants were contacted via telephone. Although used less often than face-to-face interviews in research (Novick, 2008), telephone interviews are becoming increasingly

recognised as a suitable data collection method for qualitative research (Carr & Worth, 2001). Telecommunications now support many healthcare and service industries in general, so the growing popularity of telephone interviews as a research methodology may, in part, reflect these technological advances (Carr & Worth, 2001).

Studies comparing qualitative interview methods have reported that telephone interviews produce data which are comparable in quality and detail to data collected via face-to-face procedures (Carr & Worth, 2001; Smith, 2005; Sturges & Hanrahan, 2004). When compared to face-to-face interviews, advantages of using the telephone include decreased research costs, access to participants who are geographically remote, the prevention of travel for both the interviewer and interviewee, a lower tendency for socially desirable responses due to more anonymity, increased interviewer safety, and the ability to take notes in a manner that is not distracting for the interviewee (Carr & Worth, 2001; Chapple, 1999; Kirsch & Brandt, 2002; Smith, 2005; Sturges & Hanrahan, 2004). The convenience of telephone interviews was particularly pertinent for the two target groups interviewed for Studies 3 and 4. A common barrier to engaging fathers in research and parenting programs is time constraints during business hours (Bayley et al., 2009). Similar time constraints exist for midwives, whose work schedules often rotate between day and night shifts. Offering flexible times to call the interview participants enabled the engagement of these under-represented groups in perinatal research.

The literature generally reports an optimistic view of the suitability of telephone interviews in addressing potentially sensitive topics, including mental health (Carr & Worth, 2001). This was an important consideration for Study 3 when fathers were asked about their experiences of support for their emotional wellbeing. A commonly cited concern about qualitative telephone interviews is that a lack of visual cues such as facial expressions, body language and visual prompts could lead to distorted data, however there is little evidence to support this (Novick, 2008). There is the potential for telephone interviewees to become distracted by their environment during a call, although distractions have also been reported during face-to-face interview methods (Sturges & Hanrahan, 2004). Overall, qualitative

telephone interviews were an appropriate and important methodological approach for Studies 3 and 4, demonstrating the significant potential that qualitative data can contribute to the health care literature, and complement the vast amount of quantitative data that dominates this field.

### **Online survey**

Together with qualitative telephone interviews, Study 4 incorporated an online survey to capture a broad range of Australian midwives' perceptions and experiences of engaging fathers. Capitalising on the Internet as a research tool and not merely an information resource is becoming a global trend in many disciplines, including health research (Braithwaite, Emery, De Lusignan, & Sutton, 2003). There are several methodological strengths and limitations associated with online surveys, which must be considered alongside the research aims and rationale of a project. For example, online survey research capitalises on the Internet's ability to access individuals and groups who would be difficult to contact through other channels (Wright, 2005). Additionally, they can be an effective method of getting access to a large and/or targeted group of potential respondents, due to increasing access to the Internet (Couper, 2000). Due to no mailing or printing expenses, questionnaires can be distributed at very low cost. Surveys can be launched quickly and data are often automatically collated in the software program that is used, reducing the need for respondents to return surveys to the researchers. Online surveys can be anonymous and are generally easy for respondents to complete, due to easy-to-use interfaces. These methodological strengths make online surveys an attractive data collection procedure for researchers (Couper, 2000).

Despite these advantages, there are two notable phenomena that can impact the reliability of online survey data: under-coverage and self-selection (Bethlehem, 2010). Under-coverage refers to online surveys only targeting respondents with Internet access. Consequently, survey results can only apply to a web-connected sub-population of the target group. Self-selection refers to the tendency for individuals to select themselves into a group.

In the context of online surveys, this occurs when some individuals choose to participate in an online survey, while others ignore the invitation (Wright, 2005). This can lead to biased estimates reflected in the survey data (Bethlehem, 2010). The online survey designed for Study 4 was advertised in a weekly online newsletter of Australia's largest professional body for midwives, which was sent to a national database of members. Under-coverage was a relevant limitation to this recruitment strategy, however past research has indicated that health professionals are an increasingly Internet-connected group (Braithwaite et al., 2003) and so this method was deemed appropriate for the exploratory research aims. The research project was advertised in the online newsletter twice over a one month period; the second advertisement acted as a reminder to potential respondents, which is a strategy recommended to help reduce self-selection (Bethlehem, 2010). Overall, the use of an online survey in Study 4 facilitated the recruitment of a sample of midwives that was broadly representative in that they worked across both private and public sectors, had varying ages and years of experience, and offered a comprehensive range of perinatal services to families.

## **Summary**

This chapter provided the rationale for the methods selected to address the research aims of each study conducted as part of this PhD, and outlined the key characteristics of each approach. A combination of quantitative and qualitative research methods is a major design strength of this thesis. This approach enabled a varied analysis of factors associated with fathers' perinatal mental health, and the generation of evidence to inform the development of policy and intervention efforts to promote fathers' mental health during the perinatal period. Results from the four studies are presented next, in Chapters 6-9.

## **Chapter 6: Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour and children's emotional-behavioural functioning: A longitudinal study**

The previous chapter provided the rationale for the research methodologies selected for this program of research. This chapter presents Study 1, secondary analyses of data from a longitudinal study of a nationally representative sample of Australian children and their families. This study was published as a peer-reviewed article in the *Journal of Family Psychology* (Quartile 1 journal, Impact Factor: 1.665).

Rominov, H., Giallo, R., & Whelan, T. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour and children's emotional-behavioural functioning: A longitudinal study. *Journal of Family Psychology, 30*, 907-917. doi: 10.1037/fam0000216



## Statement of Contribution

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## Abstract

**Background.** Fathers' postnatal distress has been associated with subsequent emotional and behavioural problems for children; however, the mechanisms by which this occurs have received less attention. One potential pathway could be via the negative effects that father mental health problems and parenting self-efficacy (PSE) in the postnatal period have on later parenting behaviours.

**Method.** Using a nationally representative cohort of Australian father-child dyads ( $N = 3,741$ ), the long-term relationships between fathers' psychological distress and PSE in the postnatal period, parenting behaviour when children were aged 4-5 years, and emotional-behavioural outcomes for children aged 8-9 years were explored.

**Results.** Path analysis indicated that high distress and low PSE in the postnatal period was associated with higher levels of hostile parenting, and lower parenting consistency when children were aged 4-5 years; these in turn were associated with poorer child outcomes at 8-9 years. These results remained significant after controlling for socio-economic position, couple relationship quality, mothers' and fathers' mental health, and fathers' concurrent parenting behaviour. The pathways between PSE, parenting hostility, parenting consistency and children's emotional-behavioural outcomes at age 8-9 years differed for fathers of boys, compared to fathers of girls.

**Conclusions.** Results highlight the importance of father-inclusive assessments of postnatal mental health. Support programs targeting new fathers' perceptions of parenting competence may be particularly important for fathers experiencing postnatal distress. For fathers, building a stronger sense of parenting competence in the postnatal period is important for later parenting behaviour, which relates to children's emotional and behavioural outcomes during middle childhood.

**Keywords:** child outcomes, father, postnatal, parenting behaviour, self-efficacy

## Introduction

During the first 12 months postpartum, some fathers experience significant mental health issues. Approximately 10% of fathers suffer from depression (Giallo et al., 2012; Paulson & Bazemore, 2010), with estimates even higher among men whose partners experience perinatal depression, ranging from 24-50% (Goodman, 2004). Further, 10-17% of fathers experience an anxiety disorder during this time (Matthey et al., 2003). Given these rates, there has been an increased focus on understanding the potentially enduring effects of fathers' postnatal mental health on child outcomes. A meta-analysis found that paternal depression was significantly associated with internalising and externalising psychopathology in children (Kane & Garber, 2004). Subsequently, several longitudinal studies report significant long-term effects of fathers' postnatal distress on children's emotional and behavioural functioning up to age seven years (Giallo, D'Esposito, et al., 2013; Ramchandani et al., 2005), and a higher prevalence of psychiatric diagnoses in children (Ramchandani et al., 2008).

These studies highlight the importance of including fathers in research on child development and the family environment. Further understanding is needed about the mechanisms that help to explain the association between fathers' postnatal mental health and later child outcomes, as this may inform prevention and intervention efforts targeting fathers' mental health. Guided by a developmental model exploring the transmission of psychopathology in families (Goodman & Gotlib, 1999), one potential pathway could be via the negative effects that father mental health problems and low parenting self-efficacy (PSE) in the postnatal period have on later parenting behaviours.

### *Mental Health and Parenting Self-Efficacy*

PSE is a construct broadly defined as a parent's evaluation of his or her competence in parenting ability (Coleman & Karraker, 2000; Jones & Prinz, 2005; Teti & Gelfand, 1991). A review by Jones and Prinz (2005) indicated that high PSE in the early parenting period is consistently associated with fewer parental depression symptoms and higher parenting satisfaction. This association has primarily been studied among mothers (Coleman &

Karraker, 2000; Jones & Prinz, 2005), and the association between fathers' psychological distress and PSE is less certain. This is a significant gap to address, particularly in the early parenting years, a time when fathers are developing their confidence and sense of competency as parents and are vulnerable to mental health difficulties.

The limited studies that have explored the relationship between fathers' mental health and PSE have tended to utilise small sample sizes and have yielded mixed results. For example, a study of 73 fathers of infants found no relationship between depressive symptoms and PSE (Leerkes & Burney, 2007), whereas in an investigation involving 62 fathers of toddlers, low PSE was associated with higher levels of parenting stress (Sevigny & Loutzenhiser, 2010). These findings suggest that PSE could be destabilised by parenting challenges and mental health difficulties, yet additional research is needed on the relationship between fathers' PSE and mental health in the early parenting period, and the potential impact on later parenting behaviour and child outcomes.

#### *Fathers' Mental Health, Parenting Self-Efficacy and Parenting Behaviour*

Although investigation of the influence of father mental health has been limited, a few studies have explored the relationship between fathers' postnatal mental health and parenting behaviours. For example, Paulson, Dauber, and Leiferman (2006) found that fathers' depressive symptoms at nine months postpartum were associated with less father-infant play. Meanwhile, Davis, Davis, Freed, and Clark (2011) reported that fathers with depression at one year postpartum were more likely to report spanking their children and less likely to read them stories. Likewise, Paulson, Keefe, and Leiferman (2009) found that fathers' depressive symptoms at nine months postpartum were associated with less time spent reading with children at two years of age and this was in turn associated with poorer language development. Finally, a recent study by Giallo, Cooklin, Wade, et al. (2013) reported a significant association between fathers' postnatal distress and higher levels of parenting hostility when children were aged 4-5 years. Although these studies highlight the importance of fathers' mental health to parenting behaviour, further longitudinal studies are

needed to understand the long term impact of fathers' postnatal mental health on a broad range of later parenting experiences.

A well-established determinant of parenting behaviour is PSE. A conceptual model of PSE and parenting described by Ardelet and Eccles (2001) proposed that parents who exhibit higher PSE are more inclined to engage in positive parenting behaviours. This has been supported by comprehensive descriptive reviews that report high PSE to be associated with a range of optimal parenting strategies across the childhood period including parental sensitivity and responsiveness to children's needs (Teti & Gelfand, 1991), as well as warm and affectionate parenting behaviour and monitoring (Coleman & Karraker, 2000; Jones & Prinz, 2005). Conversely, low PSE has been associated with coercive discipline or hostile parenting (Coleman & Karraker, 2000; Jones & Prinz, 2005). Parents with low PSE may readily give up when challenges arise, making it difficult to consistently use positive parenting strategies. In turn, this can confirm their beliefs of low efficacy (Ardelet & Eccles, 2001). Much of the knowledge about PSE has been generated from research with mothers. Research into the longitudinal relationship between fathers' PSE in the perinatal period and later parent behaviours is needed.

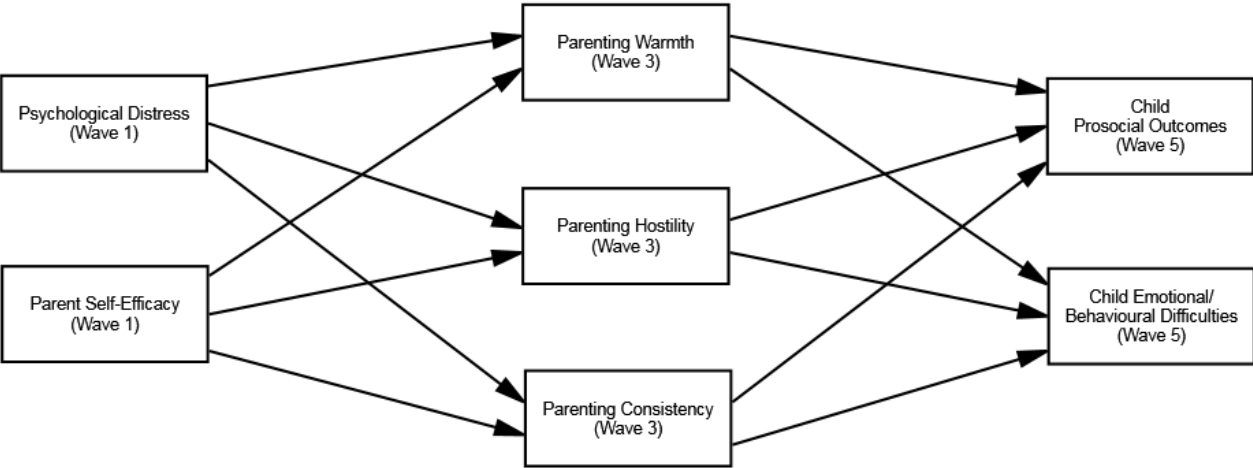
#### *Parent Behaviour and Child Outcomes*

It is well established that positive parenting behaviours promote children's brain development, emotional regulation, language skills, academic performance, and general social-psychological wellbeing (Stack, Serbin, Enns, Ruttle, & Barrieau, 2010). Again, this evidence has primarily been generated with mothers (e.g., Lovejoy, Graczyk, O'Hare, & Neuman, 2000), and is yet to be substantiated with fathers. One study reported that fathers' irritable parenting behaviours mediate the relationship between fathers' postnatal distress and emotional-behavioural difficulties for children aged five years (Giallo, Cooklin, Wade, et al., 2013). Whilst of value, this study included some key limitations. For example, important covariates such as the quality of the couple relationship were not controlled for, and parenting behaviours as mediators were assessed at the same time as the outcome variable. In addition, compared to the toddler and early school years, the middle childhood period is an

understudied area of research in relation to parenting behaviours, particularly for fathers (Kingston & Tough, 2014). It is a critical and formative period before the adolescent years that requires further attention.

*The Proposed Model*

The present study sought to build on and address the limitations of previous work by examining the association between fathers’ mental health and PSE in the postnatal period, later parenting behaviours, and emotional-behavioural outcomes for children aged 8-9 years. The first aim was to investigate whether fathers’ parenting behaviour (warmth, hostility, and consistency) when children are aged 4-5 years mediates the relationship between fathers’ psychological distress and PSE in the postnatal period, and emotional-behavioural outcomes for children aged 8-9 years. It was hypothesised that higher levels of fathers’ postnatal distress and lower PSE in the postnatal period would be associated with lower parenting warmth and consistency, and higher parenting hostility when the children were aged 4-5 years. In turn, these would be associated with higher emotional and behavioural difficulties, and lower prosocial behaviours in children aged 8-9 years. Figure 1 represents this conceptual model.



**Figure 6.1.** Conceptual model of the relationships between fathers’ mental health and PSE in the postnatal period, parenting behaviour when children are aged 4-5 years, and child outcomes when children are aged 8-9 years.

Given that the literature consistently reports mothers' mental health to be strongly associated with short- and long-term child outcomes (Halligan, Murray, Martins, & Cooper, 2007), the model was tested while accounting for mothers' mental health during the postnatal period and when children are aged 8-9 years. Paternal mental health was also accounted for when the children are aged 4-5 years and 8-9 years. Furthermore, given that the quality of the couple relationship and the family's socio-economic position are associated with paternal mental health and a range of child outcomes (Parcel & Menaghan, 1994; Whisman, Davila, & Goodman, 2011), we sought to examine whether the associations between fathers' postnatal distress, PSE, parenting behaviours, and children's emotional-behavioural functioning would remain significant even after accounting for these variables.

The second aim was to assess for model differences between paternal psychological distress, PSE, parenting, and child outcomes on child gender. Previous research has found stronger associations between fathers' postnatal distress and an increased risk for conduct problems for boys (Fletcher et al., 2011; Ramchandani et al., 2005), and emotional problems for girls (Fletcher et al., 2011). Therefore, it was hypothesised that there would be model differences for boys and girls. The key aim was to test a complex model of the pathways among distress, PSE, and child outcomes via parenting behaviour. Subsequently, assessing gender differences was exploratory and we did not specify directional hypotheses.

## **Method**

### **Study design and procedure**

Longitudinal data from the nationally representative *Growing Up in Australia: Longitudinal Study of Australian Children* (LSAC) infant cohort were used. Study design and sample information are detailed elsewhere (Gray & Smart, 2008); however, in brief, a two-stage clustered sample design was used to recruit participants. Approximately 10% of all Australian postcodes were selected (stratified by state of residence and urban vs. rural status), and then a sample of children proportional to population size was randomly selected from each postcode using the Medicare database, which includes over 90% of all Australian infants. LSAC has collected 5 waves of data biennially from when children were aged 0-12

months. Data were collected from parents and teachers by a combination of self-report surveys and face-to-face interviews.

The sample was drawn from Wave 1 (children aged 0-12 months), Wave 3 (children aged 4-5 years), and Wave 5 (children aged 8-9 years). In total, 5,107 children and their families participated in LSAC at Wave 1. The inclusion criteria for the current analyses were biological and adoptive fathers of children from two-parent families enrolled in the LSAC infant cohort. Additionally, fathers in the present study were living with their children across the study period.

## **Measures**

*Mental health* was measured at Wave 1, Wave 3, and Wave 5 for fathers, and Wave 1 and Wave 5 for mothers using the Kessler K-6 screening scale (Kessler et al., 2003). The scale examines behavioural, emotional, cognitive and psychophysiological distress. The K-6 consists of six items that ask about the respondent's feelings over the past four-week period. Items were answered on a 5-point scale ranging from 0 = *none of the time* to 4 = *all of the time*. Example items are: over the past four weeks how often "Did you feel nervous?" and "Did you feel everything was an effort?" A total scale score was used, with higher scores indicating higher psychological distress. The K-6 is a widely used scale in general purpose health surveys, due to its brevity and strong psychometric properties (Furukawa, Kessler, Slade, & Andrews, 2003; Kessler et al., 2003). Cronbach's alpha for the K-6 as well as the remaining measures with the current sample are provided in Table 2.

*Parent self-efficacy* was assessed at Wave 1 for fathers using four items from the Early Childhood Longitudinal Study-Birth Cohort (Nord et al., 2004). The items consist of statements regarding infant parental self-efficacy such as "I feel that I am good at keeping this child amused" and "I feel I am very good at routine tasks of caring for this child (feeding him/her, changing his or her nappies and giving him/her a bath)". Items were rated on a 10-point semantic scale ranging from 1 = *not how I feel at all* to 10 = *exactly how I feel*. Higher scores indicate better self-rated parenting efficacy.

*Parent behaviour.* Measures of parental warmth, parental hostility, and parental



consistency were completed by fathers at Wave 3 and Wave 5 to assess paternal behaviour.

The Parental Warmth scale is comprised of six items to assess the frequency of parental expressions of affection, intimacy and closeness towards the child. Items include “How often do you have warm, close times together with this child?” and “How often do you express affection by hugging, kissing and holding this child?” Responses were rated on a 5-point Likert scale ranging from 1 = *never* to 5 = *always/almost always*, with higher scores indicating increased parental warmth.

The Parental Hostility scale is a 5-item measure that assesses irritability, frustration and anger towards the child. Items include “Over the past 4 weeks, how often have you been angry with this child?” or “lost your temper with this child?” Responses were rated on a 5-point Likert scale ranging from 1 = *not at all* to 5 = *almost always*, with higher scores indicating increased parental hostility.

The Parental Consistency scale is a 5-item measure that assesses the frequency with which parents set and enforce clear expectations and limits. Items include “How often does your child get away with things that you feel should have been punished?” or “When you give your child an instruction or make a request to do something, how often do you make sure that she does it?”. Responses were rated on a 5-point Likert scale ranging from 1 = *never/almost never* to 5 = *all the time*, with higher scores indicating higher parental consistency.

*Children’s emotional and behavioural functioning* was measured at Wave 5 using items drawn from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a 25-item inventory. Each item consists of a statement regarding a child’s behaviour pattern over the past six-month period. The scale was completed by mothers, fathers, and teachers, who each rated how true/typical the statement is of the child’s behaviour. Items were answered on a 3-point scale where 0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*. The SDQ consists of five subscales: emotional symptoms (five items), conduct problems (five items), hyperactivity/inattention (five items), peer relationship problems (five items) and prosocial behaviour (five items). A total score from the first four sub-scales was used for total

difficulties, with higher scores indicating increased emotional and behavioural difficulties. As a measure of positive functioning, the prosocial sub-scale was used, with higher scores on this scale indicating more pro-social behaviour.

*Relationship quality* was assessed at Wave 1 for fathers using the Hendrick Relationship Assessment Scale (RAS; Hendrick, 1988). Six items assess various aspects of satisfaction with the quality of a relationship. These items are answered on a 5-point response format. Specific item responses vary, in order to be in context with the item question. Sample items include: “How well does your partner meet your needs?” (1 = *poorly* to 5 = *extremely well*); “How often do you wish you hadn’t married or lived together?” (1 = *never* to 5 = *very often*) and “How many problems are there in your relationship?” (1 = *very few* to 5 = *very many*). Higher scores indicate a higher relationship quality.

*Socio-economic position (SEP)* was rated using a composite variable, relative to the included sample, which involved ranking each family’s relative SEP based on parental income, education, and occupational prestige (Blakemore, Strazdins, & Gibbings, 2009).

*Parent and child demographics.* Information pertaining to fathers’ age (at Wave 1), birth place, language spoken at home, weekly income, and number of children was collected. Demographic information for the study child such as gender were also obtained.

### **Data analysis strategy**

Path analysis using MPlus Version 6 (Muthén & Muthén, 1998-2011) was conducted to test a series of models. First, the hypothesised model (Figure 1) in which parenting warmth, hostility and consistency (Wave 3) mediated the relationship between paternal psychological distress and PSE (Wave 1), and children’s emotional-behavioural outcomes at 8-9 years (Wave 5) was tested, while controlling for mothers’ mental health at Wave 1 and Wave 5, fathers’ mental health at Wave 3 and Wave 5, SEP and relationship quality at Wave 1, and concurrent parent behaviour at Wave 5. The hypothesised model was tested three times, each time utilising mother, father or teacher SDQ data to assess children’s emotional-behavioural functioning. Direct, indirect, and total effects were then calculated for each model. Finally, multi-group analyses were conducted to test whether the models differed

significantly by child gender. The Satorra–Bentler scaled chi-square difference test for the MLR estimation method as outlined on the Mplus website ([www.statmodel.com/chidiff.shtml](http://www.statmodel.com/chidiff.shtml)) was conducted to assess whether each of the trajectories significantly differed by child gender. Significant differences between models provide evidence of moderation.

Due to the complex survey design, all models were estimated making adjustments for the stratification by state of residence and urban versus rural status and clustering by postcodes. Maximum likelihood estimation with robust standard errors (MLR) was used, and assessed using the chi-square likelihood ratio, and other practical fit indices including the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), the Tucker-Lewis Index (TLI), and the Comparative Fit Index (CFI). Indices for the TLI and CFI should exceed .90 for an acceptable fit, and values close to or below .05 for the RMSEA and SRMR were considered acceptable (Hu & Bentler, 1999). Missing data were imputed using the full information maximum likelihood option in MPlus Version 6.0 (Muthén & Muthén, 1998-2011). Sensitivity analyses were then conducted using cases with complete data.

## **Results**

### **Sample characteristics**

Of the 5107 children and their families participating in LSAC, 864 (16.9%) fathers were not present or did not participate, resulting in no available data. In addition, 210 (4.1%) fathers were not living with their children across the study waves and 292 (5.7%) were not biological or adoptive fathers of the study child (i.e., they identified as a step-parent, grandparent, uncle etc.). This left a final sample of 3,741 fathers who fit the inclusion criteria. Demographic characteristics of the final sample are presented in Table 1.

### **Descriptive statistics**

Descriptive statistics for the study variables and covariates are presented in Table 2. Missing data were approximately 29.6% across all variables. For SDQ data, there were 2216 (59.2%) father responses, 3137 (83.9%) mother responses, and 2745 (73.4%) teacher responses. Correlations among study variables and covariates are presented in Table 2.

**Table 6.1.** Demographic characteristics of final sample at Wave 1 ( $N = 3741$ )

Demographic characteristic	
Father characteristics	
	%
Age (years) <sup>1</sup>	33.58 (7.32)
Born in Australia or New Zealand	79.4
English as first language	87.1
Aboriginal or Torres Strait Islander	1.5
Weekly income before tax (\$AUD) <sup>1</sup>	873.80 (766.96)
Infant and family characteristics	
Study child gender – Male	51.5
First child	39.5
Socioeconomic position	
Low	25.0
Middle	50.0
High	25.0

<sup>1</sup> Mean (SD)

### Testing the hypothesised mediating models

The hypothesised models were an excellent fit to the data, for father ( $\chi^2 (50, N = 3,741) = 234.47, p < .001, CFI = .96, TLI = .90, RMSEA = .03 (.027-.036), SRMR = .04$ ), mother ( $\chi^2 (50, N = 3,741) = 342.01, p < .001, CFI = .93, TLI = .84, RMSEA = .04 (.036-.044), SRMR = .04$ ), and teacher ( $\chi^2 (50, N = 3,741) = 219.51, p < .001, CFI = .96, TLI = .91, RMSEA = .03 (.026-.034), SRMR = .04$ ) SDQ report. The standardised parameter estimates for each model are presented in Figure 2. For all three models, high psychological distress in the postnatal period was significantly associated with higher parenting hostility and lower parenting consistency when children were aged 4-5 years. Similarly, low PSE in the postnatal period was significantly associated with higher parenting hostility in all three models, and significantly associated with lower parenting consistency in the father and

teacher models. There was no association between postnatal distress and later parenting warmth. Conversely, lower levels of PSE in the postnatal period were significantly associated with lower levels of later parenting warmth in all models.

Higher parenting hostility when children were aged 4-5 years was significantly associated with lower pro-social behaviours and increased emotional-behavioural difficulties for children aged 8-9 years, across all three models. Lower levels of parenting consistency were associated with lower pro-social behaviours and increased emotional-behavioural difficulties for children aged 8-9 years in the father and teacher models. Higher levels of parenting warmth were significantly associated with increased pro-social behaviours for children aged 8-9 years in the father and teacher models. There was no association between parenting warmth and later emotional-behavioural difficulties for children.

The total indirect effects of fathers' postnatal psychological distress on later child pro-social behaviours and emotional-behavioural difficulties were significant for all models. The amount of variance in children's prosocial outcomes accounted for in the models was significant at 7.2% ( $R^2 = 0.072$ ), 2.7% ( $R^2 = 0.027$ ), and 1.1% ( $R^2 = 0.011$ ) for the father, mother and teacher report, respectively. For children's emotional-behavioural outcomes, the amount of variance accounted for in the models was significant at 9.0% ( $R^2 = 0.090$ ), 5.0% ( $R^2 = 0.050$ ), and 1.0% ( $R^2 = 0.008$ ) for the father, mother, and teacher report, respectively. Specific indirect pathways are provided in Table 3. The strongest indirect pathways were via parenting hostility at Wave 3 for all models. The indirect pathways from PSE to parenting warmth and pro-social behaviours, and fathers' postnatal distress, parenting consistency and children's emotional-behavioural difficulties, were significant in the father and mother models.

### **Testing for moderating effects**

Multi-group analyses revealed significant differences between the unconstrained and constrained models for father SDQ report (unconstrained:  $\chi^2(100) = 291.76$ ,  $p < .001$ ; constrained:  $\chi^2(170) = 390.71$ ,  $p < .001$ ; model comparison:  $\chi^2_{diff}(70) = 102.54$ ,  $p = .007$ ), mother SDQ report (unconstrained:  $\chi^2(100) = 410.03$ ,  $p < .001$ ; constrained:  $\chi^2(170) = 500.86$ ,  $p < .001$ ; model comparison:  $\chi^2_{diff}(70) = 97.45$ ,  $p = .017$ ), and teacher SDQ report

(unconstrained:  $\chi^2(100) = 295.31, p < .001$ ; constrained:  $\chi^2(170) = 436.94, p < .001$ ; model comparison:  $\chi^2_{\text{diff}}(70) = 144.06, p < .001$ ). This indicated that the model pathways were moderated by child gender (see Figure 3).

### **Complete case sensitivity analyses**

Analyses were re-run with cases with complete data only ( $N = 1534$ ). The model fit indices were similar to those for the analyses with imputed data. The strength, direction, and significance of the model path were the same across the majority of pathways for father, mother, and teacher report models. There were minor differences observed for the pathways between PSE and consistency, and consistency and children's prosocial outcomes in the father and mother models. There were also differences between hostility and children's prosocial outcomes and emotional-behavioural difficulties in the teacher model. In the complete case analyses, the paths between PSE and consistency became significant in the father and mother models ( $p = 0.018$  and  $p = 0.019$ , respectively). The paths between consistency and children's prosocial outcomes, and between hostility and children's prosocial outcomes and emotional-behavioural difficulties in the teacher model were no longer significant ( $p = 0.088, p = 0.090, p = 0.093, \text{ and } p = 0.090$ , respectively). It is likely that the level of significance of paths with very small effects may have changed due to the increase in sample size associated with the use of data imputation. The complete case sensitivity analyses are available upon request from the first author.

**Table 6.2.** Correlations and descriptive statistics for the model variables and covariates

Indicator Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Father distress (W1)	-														
2 Father PSE (W1)	-0.21**	-													
3 Parenting warmth (W3)	-0.04	0.20**	-												
4 Parenting hostility (W3)	0.19**	-0.18**	-0.35**	-											
5 Parenting consistency (W3)	-0.15**	0.09**	0.11**	-0.35**	-										
6 SDQ pro-social father (W5)	-0.05*	0.04	0.22**	-0.21**	0.13**	-									
7 SDQ pro-social mother (W5)	-0.04	-0.01	0.10**	-0.14**	0.09**	0.49**	-								
8 SDQ pro-social teacher (W5)	<0.001	0.01	0.07**	-0.11**	0.05*	0.31**	0.31**	-							
9 SDQ difficulties father (W5)	0.13**	-0.04	-0.12**	0.29**	-0.16**	-0.38**	-0.31**	-0.29**	-						
10 SDQ difficulties mother (W5)	0.06**	-0.01	-0.08**	0.22**	-0.14**	-0.31**	-0.41**	-0.34**	0.63**	-					
11 SDQ difficulties teacher (W5)	0.02	0.02	-0.05*	0.09**	-0.05*	-0.23**	-0.25**	-0.60**	0.45**	0.52**	-				
12 Socio-economic position (W1)	0.05**	-0.04*	-0.001	-0.04	0.09**	0.01	0.04	0.07**	-0.14**	-0.18**	-0.12**	-			
13 Mother distress (W1)	0.19**	-0.06**	-0.06**	-0.08**	-0.12**	-0.05*	-0.08**	-0.05*	0.11**	0.19**	0.07**	-0.03	-		
14 Relationship quality (W1)	-0.30**	0.18**	0.18**	-0.18**	0.14**	0.07**	0.04*	0.06**	-0.11**	-0.04*	-0.06**	0.06**	-0.20**	-	
15 Father distress (W3)	0.01	-0.02	<0.001	-0.03	0.01	0.01	<0.001	0.03	-0.03	-0.05*	-0.01	0.03	0.02	<0.001	-

16	Father distress (W5)	0.03	-0.02	<0.001	-0.03	0.01	0.01	<0.001	0.03	-0.03	-0.05*	-0.01	0.04	0.02	<0.001	0.03
17	Mother distress (W5)	<0.001	-0.02	0.02	0.02	-0.02	0.03	-0.002	<0.001	-0.04	0.02	-0.04	0.01	0.03	-0.01	-0.02
18	Father warmth (W5)	-0.35	0.22**	0.59**	-0.27**	0.08**	0.30**	0.11**	0.09**	-0.17**	-0.13**	-0.08**	0.12	-0.07**	0.16**	0.04
19	Father hostility (W5)	0.15**	-0.12**	-0.25**	0.52**	-0.23**	-0.30**	-0.20**	-0.17**	0.46**	0.31**	0.22**	-0.02	0.08**	-0.14**	-0.05
20	Father consistency (W5)	-0.13**	0.08**	0.07**	-0.26**	0.57**	0.18**	0.10**	0.07**	-0.24**	-0.17**	-0.11**	0.10**	-0.09**	0.16**	-0.01
	Range	0-24	4-40	10-30	6-24	8-25	0-10	0-10	0-10	0-28	0-33	0-34	-	0-24	12-30	0-24
	<i>M</i>	3.30	29.86	25.39	11.84	20.62	8.23	8.49	7.88	7.38	7.59	5.78	-	3.34	26.76	2.95
	<i>SD</i>	3.22	6.13	3.37	3.22	3.13	1.70	1.67	2.18	4.84	5.26	5.72	-	3.28	3.37	3.17
	$\alpha$	0.81	0.78	0.87	0.70	0.71	0.70	0.70	0.83	0.80	0.82	0.87	-	0.82	0.84	0.82

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Correlations significant at \*\*p < 0.01, \*p < 0.05.



**Table 6.2.** (continued)

	<b>Indicator Variable</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
16	Father distress (W5)	-				
17	Mother distress (W5)	0.17**	-			
18	Father warmth (W5)	0.03	<0.001	-		
19	Father hostility (W5)	-0.04	-0.03	-0.38**	-	
20	Father consistency (W5)	0.06	0.01	0.16**	-0.38**	-
	Range	0-24	0-24	6-30	6-25	9-25
	<i>M</i>	2.47	2.96	24.44	11.79	20.61
	<i>SD</i>	2.98	3.44	3.61	3.18	3.04
	$\alpha$	0.82	0.87	0.86	0.73	0.69

Correlations significant at \*\* $p < 0.01$ , \* $p < 0.05$ .

**Table 6.3.** Specific indirect pathways from fathers' postnatal distress and self-efficacy on later parent behaviour and children's emotional-behavioural difficulties

<b>Standardized specific indirect pathways</b>	<b>Total sample indirect effect (p value)</b>	<b>Boys indirect effect (p value)</b>	<b>Girls indirect effect (p value)</b>
<i>Father SDQ Model</i>			
Postnatal distress – parenting warmth – pro-social behaviour	0.003 (0.434)	0.000 (0.969)	0.007 (0.201)
Postnatal distress – parenting hostility – pro-social behaviour	-0.022 (0.000)	-0.013 (0.029)	-0.028 (0.004)
Postnatal distress – parenting consistency – pro-social behaviour	-0.011 (0.013)	-0.015 (0.014)	-0.008 (0.175)
Postnatal distress – parenting warmth – emotional-behavioural difficulties	0.000 (0.531)	0.000 (0.969)	-0.001 (0.558)
Postnatal distress – parenting hostility – emotional-behavioural difficulties	0.042 (0.000)	0.028 (0.003)	0.056 (0.000)
Postnatal distress – parenting consistency – emotional-behavioural difficulties	0.013 (0.008)	0.013 (0.045)	0.014 (0.040)
Self-efficacy – parenting warmth – pro-social behaviour	0.033 (0.000)	0.028 (0.001)	0.042 (0.000)
Self-efficacy – parenting hostility – pro-social behaviour	0.016 (0.001)	0.017 (0.016)	0.012 (0.051)
Self-efficacy – parenting consistency – pro-social behaviour	0.003 (0.125)	0.011 (0.044)	0.000 (0.953)
Self-efficacy – parenting warmth – emotional-behavioural difficulties	-0.005 (0.359)	-0.004 (0.489)	-0.006 (0.507)
Self-efficacy – parenting hostility – emotional-behavioural difficulties	-0.030 (0.000)	-0.036 (0.000)	-0.024 (0.021)
Self-efficacy – parenting consistency – emotional-behavioural difficulties	-0.004 (0.105)	-0.010 (0.060)	0.000 (0.953)

*Mother SDQ Model*

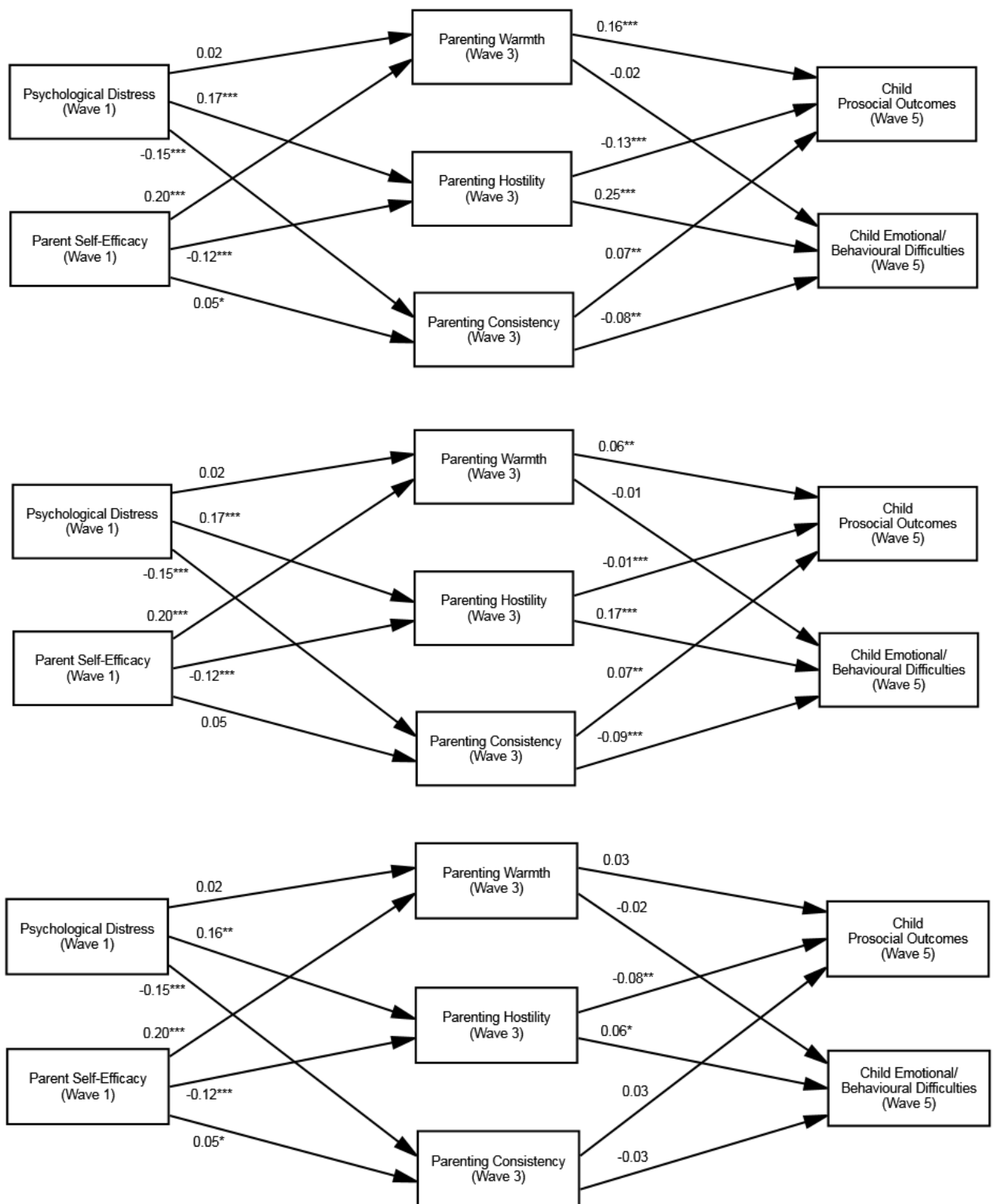
Postnatal distress – parenting warmth – pro-social behaviour	0.001 (0.517)	0.000 (0.992)	0.002 (0.374)
Postnatal distress – parenting hostility – pro-social behaviour	-0.017 (0.002)	-0.010 (0.050)	-0.022 (0.024)
Postnatal distress – parenting consistency – pro-social behaviour	-0.011 (0.012)	-0.013 (0.026)	-0.011 (0.061)
Postnatal distress – parenting warmth – emotional-behavioural difficulties	0.000 (0.693)	0.000 (0.993)	-0.001 (0.549)
Postnatal distress – parenting hostility – emotional-behavioural difficulties	0.029 (0.000)	0.020 (0.004)	0.037 (0.002)
Postnatal distress – parenting consistency – emotional-behavioural difficulties	0.014 (0.002)	0.012 (0.041)	0.018 (0.008)
Self-efficacy – parenting warmth – pro-social behaviour	0.012 (0.013)	0.012 (0.046)	0.011 (0.153)
Self-efficacy – parenting hostility – pro-social behaviour	0.012 (0.001)	0.012 (0.027)	0.009 (0.058)
Self-efficacy – parenting consistency – pro-social behaviour	0.003 (0.116)	0.009 (0.047)	0.000 (0.971)
Self-efficacy – parenting warmth – emotional-behavioural difficulties	-0.002 (0.630)	0.000 (0.967)	-0.006 (0.491)
Self-efficacy – parenting hostility – emotional-behavioural difficulties	-0.021 (0.000)	-0.026 (0.001)	-0.015 (0.032)
Self-efficacy – parenting consistency – emotional-behavioural difficulties	-0.004 (0.084)	-0.009 (0.040)	0.000 (0.971)

*Teacher SDQ Model*

Postnatal distress – parenting warmth – pro-social behaviour	0.000 (0.549)	0.000 (0.976)	0.002 (0.379)
Postnatal distress – parenting hostility – pro-social behaviour	-0.013 (0.006)	-0.009 (0.076)	-0.015 (0.062)
Postnatal distress – parenting consistency – pro-social behaviour	-0.004 (0.331)	-0.010 (0.071)	-0.001 (0.822)
Postnatal distress – parenting warmth – emotional-behavioural difficulties	0.000 (0.602)	0.000 (0.985)	-0.002 (0.369)

Postnatal distress – parenting hostility – emotional-behavioural difficulties	0.011 (0.030)	0.007 (0.171)	0.013 (0.147)
Postnatal distress – parenting consistency – emotional-behavioural difficulties	0.004 (0.237)	0.006 (0.217)	0.007 (0.227)
Self-efficacy – parenting warmth – pro-social behaviour	0.005 (0.325)	0.001 (0.859)	0.010 (0.200)
Self-efficacy – parenting hostility – pro-social behaviour	0.010 (0.011)	0.012 (0.064)	0.007 (0.126)
Self-efficacy – parenting consistency – pro-social behaviour	0.001 (0.388)	0.008 (0.109)	0.000 (0.998)
Self-efficacy – parenting warmth – emotional-behavioural difficulties	-0.004 (0.466)	0.000 (0.980)	-0.010 (0.212)
Self-efficacy – parenting hostility – emotional-behavioural difficulties	-0.008 (0.033)	-0.009 (0.161)	-0.006 (0.174)
Self-efficacy – parenting consistency – emotional-behavioural difficulties	-0.001 (0.297)	-0.005 (0.222)	0.000 (0.998)

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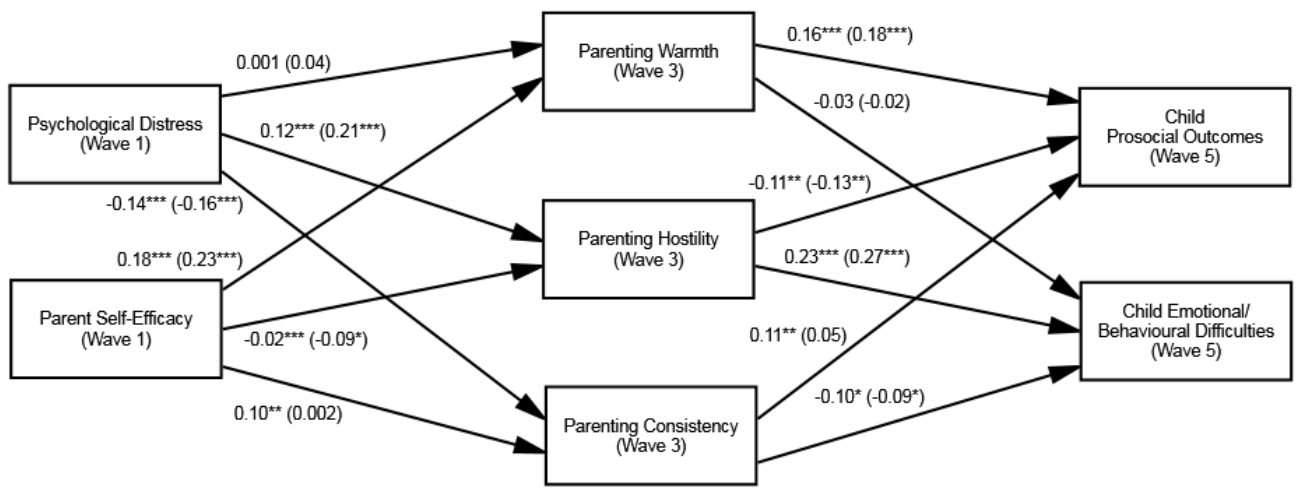


**Figure 6.2.** Standardised parameter estimates for the adjusted model by (a) father, (b) mother, and (c) teacher SDQ report on child outcomes

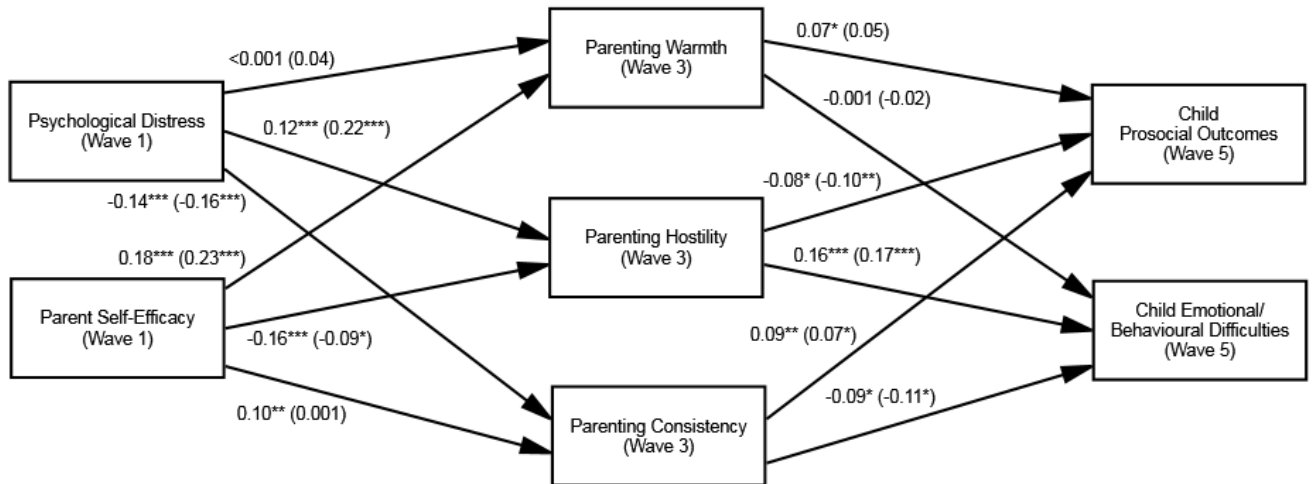
*Note.* The residual error terms between psychological distress and PSE, the parenting behaviour variables, and between the SDQ subscales are correlated but have not been shown for ease of interpretation. All paths were significant at  $p < .001$ .

*Note.* The model has been adjusted for mothers' mental health (Wave 1 and Wave 5), relationship quality (Wave 1), SEP, fathers' mental health (Wave 5), and parent behaviours (Wave 5).

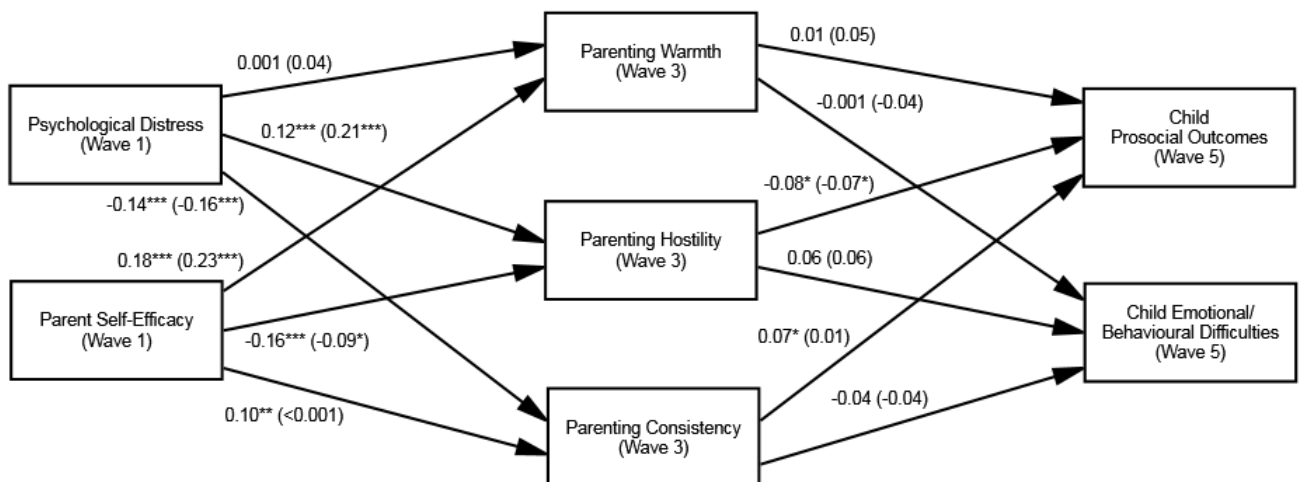
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



(a) Father SDQ report gender moderation



(b) Mother SDQ report gender moderation



(c) Teacher SDQ report gender moderation

**Figure 6.3.** Standardised parameter estimates for the adjusted model by (a) father, (b) mother, and (c) teacher SDQ report on child outcomes for boys and girls (girls in brackets).

*Note.* The residual error terms between psychological distress and PSE, the parenting behaviour variables, and between the SDQ subscales are correlated but have not been shown for ease of interpretation. All paths were significant at  $p < .001$ .

*Note.* The model has been adjusted for mothers' mental health (Wave 1 and Wave 5), relationship quality (Wave 1), SEP, fathers' mental health (Wave 5), and parent behaviours (Wave 5).

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Discussion

This is the first study to explore several parenting behaviours as potential mechanisms underpinning the relationship between fathers' postnatal mental health and PSE, and later emotional-behavioural outcomes for children across an eight year period. As expected, psychological distress and PSE in the postnatal period was associated with emotional-behavioural outcomes for children aged 8-9 years. This relationship was mediated by parenting warmth, hostility, and consistency when children were aged 4-5 years. These associations were maintained even after accounting for important covariates such as fathers' and mothers' mental health in the early childhood period, concurrent parenting behaviours and relationship quality. Finally, we found significant model differences for boys and girls.

During the postnatal period, a relationship between fathers' distress and PSE was observed. Although the direction of relationships between distress and PSE were not the focus of this study, it is likely that there is a complex bidirectional association. Fathers experiencing postnatal distress symptoms are more likely to negatively appraise or underestimate their ability to parent an infant, and PSE may in turn influence a new fathers' psychological state. For example, if fathers are not feeling confident in their parenting role, this may have an impact on overall feelings of hopelessness and stress.

The inclusion of postnatal PSE resulted in testing a more complex theoretical model than has previously been considered when exploring mechanisms that can impact later child outcomes. The significant pathways found between fathers' PSE in the postnatal period and levels of parenting warmth, hostility, and consistency when children were aged 4-5 years are consistent with theory and research indicating that PSE is an important determinant of parenting behaviour (Jones & Prinz, 2005; Shumow & Lomax, 2002). Fathers who are less efficacious in the postnatal period may be less involved and less inclined to engage in some parenting behaviours. Consequently, these fathers do not develop a strong foundation for parenting which may make it more difficult as their children grow and other parenting challenges arise. Over time, lower levels of parenting warmth, higher levels of parenting hostility, and lower levels of parenting consistency may become part of the father's parenting

style.

In all three models tested, the strongest pathway between fathers' distress and PSE in the postnatal period and later child outcomes was via fathers' parenting hostility, and via fathers' parenting consistency in two out of the three models. Fathers who are distressed and lacking in confidence in their parenting may be more easily irritated and find it difficult to regulate their emotions in challenging parenting situations. Consequently, they may resort to yelling to manage their children's behaviour, and they may not have the energy or resources to respond consistently to their children. This is in line with previous research that has reported negative parent-child interactions, characterised by hostility, irritability, inconsistent parenting, and punitive criticism, to have a stronger relationship with fathers' psychological distress, compared to positive parenting behaviours, such as warmth and monitoring (Giallo, Cooklin, Wade, et al., 2013; Kane & Garber, 2004; Low & Stocker, 2005).

The pathway via parenting warmth was significant between fathers' PSE in the postnatal period and children's pro-social outcomes for the father and mother models. This suggests that fathers who have good mental health and feel confident in their parenting role may draw on more emotional resources to share warm, affectionate and close times with their children, and are more likely to display or model behaviours that are important for promoting children's prosocial behaviour. These results are aligned with research linking mothers' PSE to maternal warmth with toddlers and older children (Jones & Prinz, 2005). Furthermore, previous research has reported maternal warmth to be associated with fewer emotional-behavioural problems for children aged 6 years (Dallaire & Weinraub, 2005). Results from the present study contribute to literature pertaining to fathers, specifically the long-term relationships between fathers' postnatal PSE, parenting warmth when children are aged 4-5 years, and pro-social outcomes for children aged 8-9 years.

The second aim was to assess for model differences between fathers' postnatal distress, PSE, parenting behaviours, and child outcomes on child gender. Our analysis found that the strength of the model pathways for boys and girls were significantly different across all three models. As this was an exploratory aim, we did not specify directional hypotheses.



An area for future research is to refine the longitudinal model and more comprehensively explore gender differences.

### **Limitations**

Several limitations are acknowledged. First, data pertaining to fathers' mental health prior to the postnatal period was not available. Research has indicated that fathers are at an increased risk of experiencing psychological distress in the gestational period (Paulson & Bazemore, 2010), and that this is a strong predictor of fathers' postnatal mental health (Ramchandani et al., 2008). Consideration of fathers' mental health across the full perinatal period (i.e., the time encompassing pregnancy and the first 12 months postpartum) is an important future research consideration.

Second, it is important to acknowledge that alternative models exploring different model pathways and reverse directions were not tested in the present study. For example, the reciprocal, bi-directional relationship between fathers' mental health and their parenting self-efficacy over time is an important area for further investigation. Furthermore, there are likely to be other factors important in understanding the impact of fathers' mental health and PSE on their children's outcomes that were not included in our model. For instance, we did not include measures of parenting behaviour in the first year postpartum. It could be argued that low parental self-efficacy is potentially a marker for suboptimal parenting behaviour, and the inclusion of parenting behaviour at baseline would strengthen conclusions regarding the unique predictive effects of early PSE on later parenting behaviour.

Third, despite statistical weighting methods being used to ensure a representative sample of the Australian population (Soloff et al., 2005), fathers in the present study were more socioeconomically advantaged compared to the general population. Fathers from lower socioeconomic backgrounds were less likely to participate, meaning they were excluded due to missing data. Additionally, fathers who identify as Aboriginal and/or Torres Strait Islander are under-represented in the data. These fathers may be at an increased risk of psychological distress, and therefore it is possible that the study results underestimate the associations between the investigated variables for these father groups. Furthermore, results

of the present study reflect the experiences of fathers who were in a couple relationship and living with their child/children across the data waves. The findings may therefore not generalise to single fathers or fathers who do not live with their children.

Finally, the relatively small effect sizes reported in this study are acknowledged. This study is based on a nationally representative population sample and effect sizes may be more subtle than those reported in clinical samples.

### **Implications and conclusions**

Despite its limitations, this longitudinal study is the first to explore fathers' parenting behaviours when children are aged 4-5 years as potential mediators in the relationship between fathers' mental health and PSE in the postnatal period and outcomes for children aged 8-9 years. The findings are notable, given the utilisation of a large sample of fathers from a longitudinal study of Australian families spanning eight years. A key strength of the study was the use of multiple reports on children's emotional-behavioural functioning from fathers, mothers and teachers. The model pathways were strongest for father report data, demonstrating the potential for biased reporting. The use of mother and teacher report strengthens the methodological rigor of the study and conclusions drawn.

The potentially enduring impact that fathers' postnatal distress and PSE can have on later parenting behaviours and child outcomes highlights the importance of father-inclusive assessments of postnatal mental health as well as programs designed to promote fathers' psychological wellbeing and PSE during the postnatal period. This is consistent with recent calls for more father-inclusive approaches to perinatal mental health (Pilkington, Whelan, & Milne, 2015). For example, psychoeducation about the range of physical, social and emotional changes new fathers experience can be provided to expectant and new fathers. Support programs targeting new fathers' perceptions of parenting competence may be particularly important for fathers experiencing postnatal distress. Practical parenting support in the postnatal period may help fathers to develop their sense of competence in their abilities to parent an infant, such as learning to read their baby's cues, changing nappies, bathing, and settling their baby to sleep. For fathers, building a stronger sense of parenting

competence in the postnatal period is important for later parenting behaviour, which is important for children's emotional and behavioural outcomes during middle childhood. Furthermore, given the potentially detrimental effect of fathers' parenting hostility and a lack of parenting consistency on later child outcomes, resources and programs that focus on these parenting behaviours are needed.

### **Authors' Note**

Data from the Longitudinal Study of Australian Children were used in this study. The study was conducted in partnership between the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA), the Australian Institute of Family Studies (AIFS), and the Australian Bureau of Statistics (ABS). The findings reported in this article are those of the authors and should not be attributed to FaHCSIA, AIFS, or the ABS.

## **Chapter 7: A systematic review of interventions targeting paternal mental health in the perinatal period**

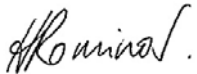
The study presented in the previous chapter highlighted the importance of supporting fathers' mental health in the postnatal period, due to the potentially enduring impact of poor mental health during that time on later parenting behaviours, and long term social and emotional-behavioural outcomes for children. This chapter presents Study 2, a systematic literature review focusing on the current status of evaluated and published interventions targeting fathers' mental health in the perinatal period. This study was published as a peer-reviewed article in the *Infant Mental Health Journal* (Quartile 2 journal, Impact Factor: 1.131)

Rominov, H., Pilkington, P., Giallo, R., & Whelan, T. (2016). A systematic review of interventions targeting paternal mental health in the perinatal period. *Infant Mental Health Journal*, 37(3), 289-301. doi: 10.1002/imhj.21560

## Statement of Contribution

I acknowledge that my contribution to the paper is above 60 percent.

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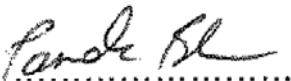
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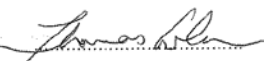
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## Abstract

**Background.** Interventions targeting parents' mental health in the perinatal period are critical due to potential consequences of perinatal mental illness for the parent, the infant, and their family. To date, most programs have targeted mothers. This systematic review explores the current status and evidence for intervention programs aiming to prevent or treat paternal mental illness in the perinatal period.

**Method.** Electronic databases were systematically searched to identify peer-reviewed studies that described an intervention targeting fathers' mental health in the perinatal period. Mental health outcomes included depression, anxiety, stress as well as more general measures of psychological functioning.

**Results.** Eleven studies were identified. Three out of five psychosocial interventions and three massage technique interventions reported significant effects. None of the couple-based interventions reported significant effects. A number of methodological limitations were identified, including inadequate reporting of study designs, and issues with the timing of interventions. The variability in outcome measures across the studies made it difficult to evaluate the overall effectiveness of the interventions.

**Conclusions.** Father-focused interventions aimed at preventing perinatal mood problems will be improved if future studies utilise more rigorous research strategies.

**Keywords:** mental health; father; intervention; paternal; perinatal

## Introduction

The transition to fatherhood can be a highly significant and transformative event in a man's life. It can involve acquiring new parenting skills and knowledge, adjusting to changes in personal identity and financial commitments, and managing pressures on the couple relationship. The increased demands on fathers' psychological resources during this time increases their vulnerability to stress, anxiety, and depression (Rowe et al., 2013). As a consequence, relatively high rates of psychological distress for fathers have been reported. For example, a meta-analysis of paternal perinatal depression reported prevalence rates between the first trimester and 1 year postpartum of 10.4% (Paulson & Bazemore, 2010). Among men whose partners experience perinatal depression, paternal depression has even higher estimates, ranging from 24-50% (Goodman, 2004). Estimates of perinatal anxiety disorders in fathers range from 10% to 17% (Ballard & Davies, 1996; Matthey et al., 2003). The trajectory of paternal psychological distress in the early parenting period was explored by Giallo et al. (2014), who found that distress was highest for fathers in the first postnatal year.

Fathers' psychological distress constitutes a public health care concern, associated with economic costs resulting from the increased utilization of health services (Edoka et al., 2011). For example, paternal postnatal depression was estimated to cost the Australian health system \$18M in 2012 (Post and Antenatal Depression Association, 2012). A growing body of research suggests that paternal mental health issues in the perinatal period are currently under-screened, under-diagnosed, and under-treated (Edward et al., 2015; Musser et al., 2013). Therefore, the true economic burden is likely to be even greater than the current estimates. Factors contributing to this may include the impact of stress and anxiety, the costs associated with disrupted employment due to mental illness, and the impact of father's mental health difficulties on the family system.

Specific to the family system, the short term effects of paternal psychological distress include fathers being less responsive to infant cues, less involved in child caregiving tasks, and increased incidences of parenting hostility (Nicholas et al., 2012). This can result in

impaired infant development (Murray & Cooper, 1997) and compromised family relationships (Goodman, 2004). Longer term impacts include deleterious effects on children's emotional, social, and cognitive development and wellbeing, and continued strain on the couple relationship (Buist et al., 2003; Giallo, D'Esposito, et al., 2013; Ramchandani et al., 2005; Ramchandani et al., 2008). Interventions targeting fathers' mental health in the perinatal period are therefore critical for the promotion of healthy fathers, children, and families (Olds, Sadler, & Kitzman, 2007; Panter-Brick & Leckman, 2013).

Most intervention studies and many health services aimed at improving mental health in the perinatal period have targeted mothers. Consequently, information on the effectiveness of these interventions are mother focused (Dennis & Dowswell, 2013; Dennis & Hodnett, 2007; Dennis, Ross, & Grigoriadis, 2007). Little is known about the effectiveness of programs focusing on fathers' mental health, particularly in the perinatal period. Previous review papers synthesising the literature on parenting interventions for fathers have focused on father-infant interactions (Magill-Evans et al., 2006), or processes to engage fathers (Panter-Brick et al., 2014). To the authors' knowledge, no systematic reviews have been conducted on interventions targeting fathers' mental health in the perinatal period. Given the prevalence of paternal mental health issues in the perinatal period, and the potential impact on fathers, children, and families, a review with this focus is required. Therefore, this review aimed to identify the current status of father-focused interventions in the perinatal period and assess their effectiveness in preventing and treating paternal mental illness during this critical time.

## **Method**

### **Search strategy**

A systematic search was conducted in accordance with the PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses; Moher et al., 2009) and the protocol was registered with the PROSPERO database of systematic reviews (<http://www.crd.york.ac.uk/prospere>; registration number CRD42015015035). Computerized literature searches of PsycINFO, MEDLINE, CINAHL, and Web of Science databases were



conducted for studies published up to November 10, 2015. Keywords were generated for each main concept by examining the terminology referred to in the literature and searching subject headings in the databases. The following search terms were used: “(father\* or paternal\* or dad) and (perinatal or postnatal or post natal or pregnan\* or prenatal or antenatal or postpartum) and (intervene\* or prevent\* or evaluat\* or therap\* or counsel\* or self help or support\* or program\* or service\* or education or treatment\* or psycho\* or online or health promotion)”.

### **Selection criteria**

Articles were identified by screening the title, abstract, and if required, the full text. Fulfilment of the following inclusion criteria were required: a) published in a peer-reviewed journal; b) described an intervention in which the primary or secondary aim was the prevention or treatment of fathers’ mental illness in the perinatal period; c) reported father outcomes separate from mother outcomes; d) analysed depression, anxiety, stress, and general measures of psychological functioning as outcomes variables; and e) participants were a general sample of fathers (i.e., not father groups constrained to particular samples such fathers of infants who required neonatal care). Studies were excluded if: a) the article was a meta-analysis, review paper, case report, or discussion paper; and b) the article was in a language other than English.

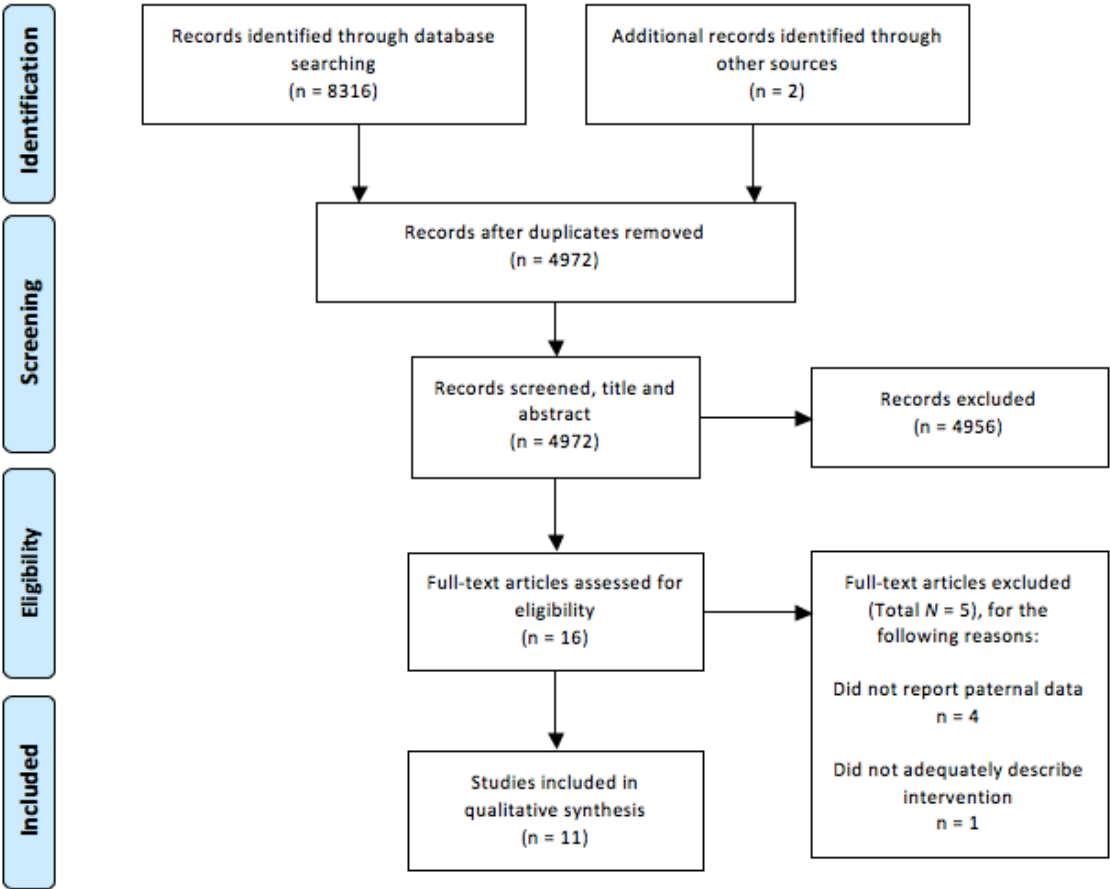
### **Data extraction and assessment of quality**

Two of the co-authors independently assessed all articles against the inclusion and exclusion criteria. Results were compared and discrepancies discussed until consensus was reached. Criteria developed by Dennis and Dowswell (2013) were then used to assess the methodological quality of the studies included in this review: (1) randomization of participants: adequate, inadequate, unclear; (2) allocation concealment (checking for possible selection bias): adequate, inadequate, unclear; (3) blinding of participants: yes, no, inadequate, unclear; (4) blinding of outcome assessment: yes, no, inadequate, unclear; and (5) percentage of participants with complete follow-up data at final assessment. Two of the

co-authors independently assessed each criterion. Discrepancies were resolved through discussion.

### Results

Results of the systematic literature search are outlined in Figure 1, according to the PRISMA statement (Moher et al., 2009). Published between 1994 and 2012, 11 father-focused interventions targeting paternal mental health outcomes in the perinatal period were identified. Table 1 summarises the characteristics of the included studies, including methodological quality. The studies were grouped into categories to examine specific types of interventions. Five studies described psychosocial programs, which emphasised skills, knowledge, emotional wellbeing, and social wellbeing related to parenting. Three studies focused on the effects of massage techniques. The remaining three studies adopted couple-based sessions, which focused specifically on the couple relationship and co-parenting.



**Figure 7.1.** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram.

## **Psychosocial approaches**

The most common approaches identified were psychosocial and all included antenatal sessions. In the earliest of these, Hung, Chung, and Chang (1996) examined the effect of childbirth classes on first-time fathers' levels of depression and anxiety following participation in their partner's labour/delivery. Three 2-hour childbirth sessions were held over three consecutive days around the 39<sup>th</sup> week of pregnancy. The sessions involved lectures, videotapes, and group discussions focused on the physiology and psychology of pregnancy, the process of labour and birth, and the roles of health care providers. Control group fathers did not participate in any classes. Post-intervention data were collected on the first day postpartum in the hospital. No statistical evidence was found to support the function of the childbirth classes in decreasing first-time fathers' depression and anxiety in response to their partner's labour/delivery. However, time frames between measurement points were very short (one week), so there may not have been sufficient time to detect intervention effects.

A study by Li et al. (2009) also evaluated the impact of an antenatal education program for expectant fathers who attended their partner's labour/delivery on their anxiety levels. A four-hour class, held in the evenings or on weekends, was delivered to expectant fathers in the intervention group. The class included a tour of the maternity ward, information on labour/delivery, a discussion about concerns, demonstrations of how to assist with labour pain, and relaxation strategies for the expectant father himself. Fathers were also provided with written information and a CD for practicing some of the strategies at home with their partner, however details of these resources were not provided. The mothers' gestation stage when the fathers received the intervention was also not specified. Expectant fathers in the control group received an information pamphlet outlining ways to provide support and encouragement to their partner during labour/delivery, waist massage, and relaxation/breathing strategies. Fathers' state anxiety was measured in hospital, two hours after their child's birth. Results showed a significant decrease in state anxiety for fathers who

participated in the program. No changes in state anxiety were found in the control group. Unfortunately, no longer-term measures of anxiety were collected.

In another early investigation, Diemer (1997) adopted a broader focus by extending beyond the fathers' reaction to their partner's labour/delivery. The effects of father-focused antenatal classes on stress during the antenatal period were compared with traditional childbirth classes. The father-focused classes were delivered over eight weeks and emphasised role changes, financial and physical support, emotional support, sexuality, feelings, concerns, social support, coping skills, and relaxation exercises. Weekly homework tasks included reading about pregnancy and parenting, discussing feelings about pregnancy and parenting with a wider social network, negotiating domestic and parenting roles with their partner, and attending their partner's antenatal appointments. Fathers in the control group attended eight weekly traditional antenatal birth classes. At the conclusion of the program, it was found that the men who participated in the father-focused group demonstrated a significant change in seeking more social support; however the classes did not have a significant impact on their antenatal stress levels.

Matthey, Kavanagh, Howie, Barnett, and Charles (2004) evaluated the effectiveness of an antenatal psychosocial intervention on the postnatal adjustment (specifically depression and self-esteem) of mothers and fathers. An additional session was added to a usual six-week antenatal class program. The intervention session provided couples with the opportunity to discuss concerns and brainstorm solutions to 'difficult day' scenarios and common worries. The intervention group also received two mail outs. The first was sent two weeks after the intervention session and consisted of a measure that enabled both partners to discuss the distribution of childcare and household tasks. The second mail out was sent 1-2 weeks postpartum and included a tip sheet on coping and support strategies, another copy of the measure sent in the first mail out, and a form designed to enhance awareness about how each partner was experiencing parenthood. A control group attended the usual six-week antenatal class program. A non-specific control group also attended the antenatal class program, as well as received a single session that focused on the importance of play for

infants' development, plus two mail outs with information about baby play. The purpose of this non-specific control group was to control for elements of the intervention that may have had a favourable effect on the outcome; for example, the additional antenatal session, postpartum considerations, and extra contact via the mail-outs. Postnatal adjustment was assessed at six weeks and six months postpartum. It was found that the intervention was effective in enhancing the adjustment of mothers, but not fathers at either the six-week or six-month postnatal follow up. The researchers suggested that fathers may have felt uncomfortable discussing many of their concerns in the company of their partners, and that a male-specific psychosocial intervention might facilitate greater paternal adjustment.

Tohotoa et al. (2012) evaluated the impact of a father inclusive antenatal intervention on fathers' postnatal anxiety and depression. Adopting a similar procedure to Matthey et al. (2004), fathers in the intervention group attended a one-hour, fathers-only session atop their routine couple-based antenatal classes at a hospital. Facilitated by a male, the session focused on the role of the father, information on the benefits of breastfeeding, and expectations about the first month being at home with a new baby. After the birth of their baby, weekly support packages were sent out to fathers for six weeks. The packages included information on how to support their partner's breastfeeding, infant developmental milestones, strategies to reduce stress, and postnatal depression. Notably, there were no checks of whether fathers had referred to the information received. The control group participated in routine antenatal classes. Post-intervention data were collected at six weeks postpartum. Results indicated a significant decrease in anxiety for fathers in the intervention group. No changes in anxiety were found for fathers in the control group. The vast majority of the fathers (95%) in both the intervention and control groups did not report any pre- or postnatal depression and there were no significant changes from baseline to post-intervention scores. This suggested that depression levels in the groups (5%) remained constant.

## **Massage techniques**

In contrast to the psychosocial approaches, three studies incorporated the instruction of massage techniques in interventions that targeted fathers' mental health. The first of these was by Latifses, Estroff, Field, and Bush (2005) who examined the effects of partner pregnancy massage and relaxation on expectant fathers' anxiety. Expectant fathers were randomly assigned to a massage therapy, relaxation training, or control group. In the massage condition, a licenced masseuse taught the expectant fathers how to massage their pregnant partners. They were instructed to follow a 20-minute massage routine twice a week at home, for five weeks. For the relaxation condition, the expectant father and mother were taught a 20-minute relaxation technique. Guided by a recording of the technique, they were instructed to practice the technique for 20 minutes, twice a week at home, for five weeks. Participants in the control group received usual childbirth classes. It was found that levels of self-reported anxiety significantly decreased for the expectant fathers in the massage therapy condition. No differences were found in the relaxation or control groups. One father in the study stated, 'relaxing my wife relaxes me' (Latifses et al., 2005, pg. 281); learning and demonstrating the physical skill of partner massage may have been the distinguishing factor that impacted anxiety levels for fathers in the massage condition, compared to the relaxation condition and control group.

A subsequent study by Field et al. (2008) sought to determine whether partner pregnancy massage could not only reduce pain and stress symptoms in the expectant mothers, but also benefit expectant fathers' antenatal depression, anxiety and anger levels. Similar to the previous study, a licenced masseuse taught the expectant fathers how to massage their pregnant partners. Beginning in the second trimester, the expectant mothers received two 20-minute massages at home per week, over 16 weeks from their partners. Control group expectant fathers did not massage their partners. Post-intervention data were collected at approximately 32 weeks gestation. Results indicated that compared to the control group, expectant fathers in the massage intervention had significantly reduced

depression and anxiety levels. Notably, there was a decline in anger scores for expectant fathers in the intervention group, but not at a statistically significant level.

A third study utilised massage techniques to target fathers' mental health. Rather than massaging partners, Cheng, Volk, and Marini (2011) explored whether an infant massage intervention was effective in reducing fathers' postnatal stress. A licenced masseuse provided fathers of infants aged between 5-14 months old with demonstrations of massage strokes on a doll. Fathers mimicked the techniques on their own child. The intervention was delivered over four weeks; however, details such as length of classes or frequency of classes over the time period were not specified. Compared to fathers in the wait-list control group, fathers in the infant massage intervention reported significantly lower stress, post-intervention. The study suggested that encouraging fathers to massage their infants may be an efficient way to decrease paternal stress related to perceptions of incompetence and role restriction, and assist with father-infant attachment and personal health.

### **Couple-based interventions**

Although some of the studies reviewed above included couples, the following three interventions focused specifically on the couple relationship. In the earliest of these, Coffman, Levitt, and Brown (1994) examined parents' postpartum emotional affect as a function of clarifying expectations of partner support. Couples in the intervention received an additional class to their traditional antenatal program, where they discussed expectations for mutual support after childbirth. Each participant rated the extent to which they expected his or her partner to perform several support functions. Partners reviewed the responses and were encouraged to discuss any surprises, differences, or similarities that they found. The control group received usual antenatal class curricula. Post-intervention questionnaires were mailed to participants three months after the expected delivery date of the baby. It included a measure of received support, which assessed the extent to which each participant perceived that his or her partner had performed the support functions discussed in the intervention. Results indicated no overall significant intervention effects on the emotional affect of fathers,

three to six months postpartum. It was noted, however, that the amount of received support in the postpartum period was more strongly associated with fathers' emotional affect, compared to clarification of their support expectations.

In another study focused on couple support, Gjerdingen and Center (2002) evaluated the impact of a brief antenatal support and division of labour intervention on a general measure of first-time parents' mental health in the early postpartum period. During the fourth and fifth classes of a standard antenatal class program, couples in the intervention attended two 30-minute breakout sessions. In the first session, couples discussed partner satisfaction and support, and were encouraged to make validating statements and suggestions to each other about feeling loved and cared for. In the second session, couples developed a six-month postpartum plan related to the division of household, employment and childcare tasks. Couples in the control group received a standard antenatal birth program. No significant treatment group differences were found for the general mental health of mothers or fathers at the six-month postpartum follow up. The use of a general measure of mental health may have limited the evaluation of the intervention. Differences between groups may have been found if more specific mental health measures were used.

Finally, Feinberg and Kan (2008) evaluated the effect of a couple-based antenatal program on parents' postpartum depression and anxiety. In contrast to other studies that added a session to routine antenatal programs, this intervention comprised four antenatal and four postnatal classes for couples. Details about timeframes were not specified. The sessions focused on emotional self-management, relationship conflict management, problem solving techniques, enhancing communication, and a discussion of support strategies that would enhance positive co-parenting. Couples in the control group received a pamphlet about factors to consider when choosing child-care. Both groups concurrently attended a standard antenatal birth program. At the six-month postpartum follow up, results indicated significant program effects on some variables such as co-parental support and several indicators of infant regulation; however there were no significant intervention effects on paternal depression or anxiety.



## **Methodological appraisal**

The methodological quality of the studies is summarised in Table 1. Of the eight studies that utilised a randomised control trial (RCT) design (Coffman et al., 1994; Feinberg & Kan, 2008; Field et al., 2008; Gjerdingen & Center, 2002; Latifses et al., 2005; Li et al., 2009; Matthey et al., 2004; Tohotoa et al., 2012), most failed to report adequate details to accurately evaluate methodological quality. Only two studies described how randomisation of participants to groups was determined (Gjerdingen & Center, 2002; Li et al., 2009). Of these, only one provided adequate information about allocation concealment (Li et al., 2009). Matthey et al. (2004) was the only investigation that sufficiently blinded participants to groups. The blinding of outcome assessment results was achieved in all 11 studies, as post-intervention data on the mental health outcomes measures were collected via self-report surveys. Although individual perceptions of mental health symptoms are important, the limited use of objective evaluations makes it difficult to reduce rater-associated biases. Participant follow up rates ranged from 65% - 100% across the studies.

## **Discussion**

Of the 11 interventions reviewed, five reported significant intervention effects for a variety of fathers' mental health outcomes. Two utilised a psychosocial approach (Li et al., 2009; Tohotoa et al., 2012), and three employed massage techniques (Cheng et al., 2011; Field et al., 2008; Latifses et al., 2005). None of the couple-based interventions reported significant changes in paternal mental health in the perinatal period. Issues related to outcome measures, timing of content delivery, and mode of delivery across the studies are discussed.

## **Outcome measures**

The variability of mental health outcomes across the studies made it difficult to assess the effectiveness of the interventions. The outcome measures identified in this review included stress, anxiety, depression, anger, self-esteem, and general measures of emotional affect and mental health. To an extent, this indicates some recognition of fathers' perinatal mood problems extending beyond the traditional definition of depression, an important

consideration in perinatal mental health research (Christensen, Batterham, Griffiths, Gosling, & Hehir, 2013; Rallis, Skouteris, McCabe, & Milgrom, 2014). In order for the efficacy of interventions to be evaluated, however, the use of standardized outcome measures across different intervention programs is critical. For example, the Edinburgh Postnatal Depression Scale (EPDS) has been endorsed as a valid and reliable measure of mood in fathers (Edmondson, Psychogiou, Vlachos, Netsi, & Ramchandani, 2010; Matthey, Barnett, Kavanagh, & Howie, 2001). Additionally, one study (Tohotoa et al., 2012) did not provide adequate psychometric information on the outcome measures, making it difficult to evaluate the results.

Only three of the studies in this review employed multiple mental health outcome measures (Field et al., 2008; Hung et al., 1996; Matthey et al., 2004). This suggests that the majority of the interventions did not consider the high co-morbidity of mental health problems such as depression and anxiety. Research has reported that co-morbid mood problems can be more treatment resistant in mothers (Yelland, Sutherland, & Brown, 2010). The limited success of the interventions targeting fathers' mental health may, in part, be related to not adequately considering a wider range of mental health outcomes.

### **Timing of content delivery**

Eight out of the 11 interventions were conducted exclusively during the antenatal period, and one included both antenatal and postpartum components (Feinberg & Kan, 2008). One intervention was delivered in its entirety in the postpartum period (Cheng et al., 2011). With regard to timing, research has yielded mixed results regarding when parents are most receptive to parenting information. For example, it has been suggested that during pregnancy, expectant parents are so focused on the labour and birth process that they are not ready to hear information about possible postpartum changes to lifestyle and relationships (Fletcher, Silberberg, & Galloway, 2004). In contrast, other research has reported the second trimester as the time expectant parents are most amenable to learning about postpartum adjustment (Midmer, Wilson, & Cummings, 1995). The focus of the interventions identified in this review varied considerably. Subject matter of the interventions

delivered in the antenatal period included partner massage, preparing for labour and birth, breastfeeding, the role of the father, the distribution of childcare and household tasks, and clarifying partner support expectations. Content from interventions delivered in the postpartum period included information on infant developmental milestones, breastfeeding, postnatal depression, and infant massage. Some of this content may have helped fathers prepare for particular aspects of parenting; however there were limited intervention effects for fathers' mental health outcomes. Timing of content delivery may have contributed to this. This consideration may be particularly relevant in understanding the lack of intervention effects for fathers' antenatal stress in the study by Diemer (1997). A comprehensive range of topics relevant to the whole perinatal period were covered in the eight-session program, however fathers may not have been receptive to some of the postnatal content delivered in the antenatal period. Consequently, fathers' antenatal stress was not adequately targeted.

The studies that reported significant intervention effects were notable in terms of their timing of content. The content of the antenatal intervention by Li et al. (2009) was pertinent to the expectant fathers' participation in the impending birth of their baby. The intervention by Tohotoa et al. (2012) covered a variety of topics during the antenatal intervention and postnatal mail outs, relevant to the stage of the perinatal period. It was interesting that all three of the massage technique interventions reported significant improvements in fathers' mental health outcomes. Fathers' experiences of depression, anxiety and stress in the perinatal period may be related to perceptions of role restriction and feeling superfluous (Nyström & Öhrling, 2004). Whether it be massaging partners in the antenatal period (Field et al., 2008; Latifses et al., 2005) or infant massage in the postnatal period (Cheng et al., 2011), learning and applying a tangible skill such as massage may improve fathers' depression, anxiety and stress by helping them to feel valued and connected. Together, the studies that demonstrated intervention effects highlight the importance of timing of content considerations in intervention development. Additionally, further research to identify fathers' specific support needs for their emotional health in the perinatal period is critical (Letourneau, Duffett-Leger, Dennis, Stewart, & Tryphonopoulos, 2011; Rowe et al., 2013; Widarsson et

al., 2012), as this information will better inform content inclusions and timing of intervention delivery.

### **Mode of delivery**

The mode of intervention delivery was similar across most studies. All interventions were primarily face-to-face, and all were delivered in a clinical setting. Although some benefits were reported, the practicalities of face-to-face interventions pose several challenges for fathers. For example, group sessions can only cater for a restricted number of participants and require physical attendance at a location that may not be convenient. Additionally, men often have limited time availability due to work commitments, resulting in low attendance rates and high levels of attrition (Bayley et al., 2009). Recent research has described the challenges of engaging fathers in perinatal services (Bayley et al., 2009; Garfield, 2015; Matthey, Reay, & Fletcher, 2009). Alternative forms of provision of services, and fathers' preferences for service formats should therefore be explored to improve accessibility and engagement. For example, interventions delivered online can reach a wider cohort of fathers, and reduce the burden on health professionals (Fletcher, Vimpani, Russell, & Keatinge, 2008; Leach, Christensen, Griffiths, Jorm, & Mackinnon, 2007; StGeorge & Fletcher, 2011). The efficacy of self-help resources to support fathers' mental health should also be explored further (e.g. Milgrom, Schembri, Ericksen, Ross, & Gemmill, 2011).

### **Limitations**

As outlined above, there were significant methodological limitations of existing studies, including inadequate reporting of study designs, inconsistent outcome measures, and issues with the suitability of program content corresponding to the timing of program delivery. The main limitation to this review is the absence of statistical analyses in the evaluation of the intervention effects, increasing the potential for subjectivity. Nevertheless, a descriptive approach was suitable for the research aims. Employing a systematic search strategy and an independent secondary data coder enhanced the robustness of the review.

## **Conclusions**

Perinatal programs occur on a regular basis in many settings worldwide; however there are very few programs that effectively address expectant and new fathers' mental health. Of the few that have been documented, the variability in outcome measures, inadequate consideration of co-morbid mood problems, and limited intervention effects makes it difficult to evaluate their current effectiveness. Additionally, while there was some diversity in the types of interventions identified in this review, all were universal prevention strategies. There is a clear need for treatment interventions to also support fathers who are experiencing clinical levels of distress in the perinatal period.

Given the shift in social attitudes towards fathers and changes in their own aspirations for their role as a parent (Dette-Hagenmeyer, Erzinger, & Reichle, 2014), the value of supporting fathers in parenting interventions is clear. More specifically, the long-term consequences of paternal perinatal mood problems highlight the need for interventions to target fathers' mental health. This is consistent with recent calls for more father inclusive approaches to perinatal mental health (May & Fletcher, 2013; Pilkington, Whelan, et al., 2015). It is evident from this review that interventions targeting fathers' perinatal mood problems need to employ more rigorous research designs.

(See Appendix F for a list of the studies included in this review)

**Table 7.1.** A summary of published interventions targeting fathers' mental health in the perinatal period

Reference	Intervention name	Delivery	Intervention summary	Final sample used for analysis	Father mental health outcome measure	Data Collection/ Follow up period	Efficacy	Methodological quality
<b><i>Psycho-educational approaches</i></b>								
Hung, Chung and Chang (1996)	- <i>(childbirth preparation program)</i>	3 2-hour antenatal classes	Classes focused on physiology and psychology of pregnancy, the process of labour/birth, and nursing care in normal labour/birth	Primiparous fathers, <i>N</i> = 100 TG <i>n</i> = 50 CG <i>n</i> = 50	SDS SAS	3 time points: 36 <sup>th</sup> week of pregnancy, 39 <sup>th</sup> week of pregnancy, 1 day postpartum	N – no effect on fathers' intrapartum depression or anxiety	Randomisation: inadequate Allocation concealment: inadequate Blinding of participants: No Blinding of outcome assessment: yes (self-report) Follow up data: 65% Overall; 70% of TG and 60% of CG
Li et al. (2009)	<i>Birth Education Program for Expectant Fathers Who Plan to Accompany Their Partners Through Labor and Birth</i>	Antenatal program, 4 hours in total	Program provided information on labour and delivery, discussed the concerns of expectant fathers, and demonstrated how each expectant father could support and assist with his partner's labour pain and relax himself	Primiparous fathers, <i>N</i> = 87 TG <i>n</i> = 45 CG <i>n</i> = 42	STAI	Measured at baseline (couples began program at 34-36 weeks gestation), and 2 hours after delivery of baby	Y – intrapartum state anxiety decreased for fathers in intervention group	Randomisation: adequate Allocation concealment: adequate Blinding of participants: no Blinding of outcome assessment: yes (self-report) Follow up data: 81% Overall; 83% of TG, 78% of CG
Diemer (1997)	- <i>(perinatal education)</i>	8 antenatal classes	Father-focused discussion classes and homework in addition to traditional antenatal classes	Primiparous and multiparous couples, <i>N</i> = 83 fathers TG <i>n</i> = 43	BSI	During the first and last sessions	N – no effect on fathers' antenatal stress	Randomisation: inadequate Allocation concealment: unclear Blinding of participants: unclear Blinding of outcome assessment:

				fathers				yes (self-report)	
				CG $n = 40$ fathers				Follow up data: 78% overall. 80% of TG, 70% of CG	
Matthey, Kavanagh, Howie, Barnett, and Charles (2004)	<i>Additional 'empathy' session in Preparation for Parenthood</i>	1 single antenatal class added to standard 6 session program + mailed information	Intervention session focused on increasing couples' awareness of each other's psychosocial concerns in pregnancy and the postpartum by discussing their them in separate and mixed gender groups	Primiparous couples, $N = 199$ TG $n = 66$ , CG $n = 74$ , NSCG $n = 59$	POMS  CES-D	6 weeks and 6 months postpartum	N – no effect on fathers' postpartum depression or self-esteem	Randomisation: study reported randomisation but no information was provided on how this was done  Allocation concealment: unclear  Blinding of participants: adequate  Blinding of outcome assessment: yes (self-report)  Follow up data: 74% of TG, 73% of CG, 76% of NSCG	
Tohotoa et al. (2012)	- <i>(father inclusive education program)</i>	Additional single antenatal session	Single session facilitated by a male educator addressing the role of the father, breastfeeding, and what to expect in the first four weeks at home with a new baby + written information on infant development, stress reduction strategies, and postnatal depression	Primiparous and multiparous fathers, $N = 556$ TG $n = 303$ CG $n = 253$	HADS	6 weeks postpartum	M – postpartum anxiety decreased for fathers in intervention group. No effect on postpartum depression	Randomisation: study reported randomisation but no information was provided on how this was done  Allocation concealment: unclear  Blinding of participants: No  Blinding of outcome assessment: yes (self-report)  Follow up data: 82% overall; 83% of TG and 80% of CG	
<b>Massage techniques</b>									
Latifses, Estroff, Field, and	- <i>(massage)</i>	Antenatal classes in massage therapy	Massage – fathers were taught to massage their pregnant wives,	Expectant couples	STAI (state anxiety measure only)	At completion of 5 week program	Y – antenatal anxiety decreased for fathers in the	Randomisation: study reported randomisation but no information was provided on how this was done	

Bush (2005)	<i>therapy</i>	OR relaxation training	provided with a handout, and instructed to massage their partner twice weekly for five weeks  Relaxation – both the father and mother were taught a 20-minute relaxation program, and instructed to listen to an audiotape of the program twice weekly for five weeks	$N = 139$  Massage $n = 47$  Relaxation $n = 46$  CG $n = 46$			massage group	Allocation concealment: unclear  Blinding of participants: no  Blinding of outcome assessment: yes (self-report)  Follow up data: 86%
Field et al. (2008)	-  <i>(massage therapy)</i>	Single session + DVD	Fathers were taught how to massage their partner by trained therapists and subsequently provided their partners with two 20-minute massages per week over 16 weeks	Primiparous and multiparous couples  $N = 57$  TG $n = 29$  CG $n = 28$	CES-D  STAI  STAXI	Follow up at 32 weeks gestation	M – antenatal anxiety and depression decreased for fathers in intervention group. No effect on antenatal anger	Randomisation: study reported randomisation but no information was provided on how this was done  Allocation concealment: unclear  Blinding of participants: unclear  Blinding of outcome assessment: yes (self-report)  Follow up data: 100%
Cheng, Volk, and Marini (2011)	-  <i>(infant massage)</i>	4 postpartum classes	Four sessions on infant massage	Fathers,  $N = 24$  TG $n = 12$  CG $n = 12$	PSI	Immediately after intervention	Y – postpartum stress decreased for fathers in intervention group	Randomisation: inadequate  Allocation concealment: inadequate  Blinding of participants: no  Blinding of outcome assessment: adequate (self-report)



Follow up data: 100%

**Couple-based interventions**

Coffman, Levitt, and Brown (1994)	- <i>(clarifying expectations)</i>	1 additional antenatal class	Parents discussed and clarified their expectations around partner support following childbirth	Primiparous and multiparous married couples,  <i>N = 204 (n = 105 women, n = 99 men)</i>  TG <i>n = 97</i>  CG <i>n = 107</i>	ABSc	3-6 months postpartum	N – no effect on fathers' postpartum emotional affect	Randomisation: study reported randomisation but no information was provided on how this was done  Allocation concealment: unclear  Blinding of participants: no  Blinding of outcome assessment: adequate (self-report)  Follow up data: 70% of fathers
Gjerdingen and Center (2002)	- <i>(support and work planning intervention)</i>	2 additional antenatal classes	The sessions focused strengthening the partner relationship and negotiating the division of childcare and household tasks	Primiparous couples,  <i>N = 129</i> fathers  TG <i>n = 69</i> fathers  CG <i>n = 60</i> fathers	5 item mental health scale from the SF-36	6 months postpartum	N – no effects on fathers' postpartum general mental health	Randomisation: adequate  Allocation concealment: no  Blinding of participants: no  Blinding of outcome assessment: yes (self-report)  Follow up data: 87% overall  90% of TG, 84% of CG
Feinberg and Kan (2008)	<i>Family Foundations</i>	4 antenatal classes, 4 postpartum classes	Program focused on emotional self-management, conflict management, problem solving, communication, and co-parenting support strategies	Primiparous couples,  <i>N = 152</i>  TG <i>n = 79</i>  CG <i>n = 73</i>	CES-D	6 months postpartum	N – no effect on fathers' postpartum depression or anxiety	Randomisation: study reported randomisation but no information was provided on how this was done  Allocation concealment: unclear  Blinding of participants: no  Blinding of outcome assessment:

yes (self-report)

Follow up data: 90% overall.

89% of TG, 91% of CG

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TG = Treatment group; CG = Control group; NSCG = Non-specific control group

ABSc = Bradburn Affect Balance Scale; BSI = Brief Symptom Inventory; CES-D = Centre for Epidemiological Studies Depression Scale; HADS = Hospital Anxiety and Depression Scale; POMS = Profile of Mood States; PSI = Parenting Stress Index; SAS = Zung's Self-Rating Anxiety Scale; SDS = Zung's Self-Rating Depression Scale; SF-36 = Short Form (36) Health Survey; STAI = State Anxiety Inventory; STAXI = State Anger Inventory

Efficacy: Y = Yes; N = No; M = Mixed findings

## **Chapter 8: Fathers' experiences of support for mental health and parenting in the perinatal period**

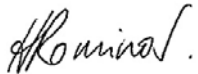
The study presented in the previous chapter summarised the evidence base of interventions targeting fathers' mental health in the perinatal period. A key message from the review was the importance of future interventions being informed by father voices about how they want to be supported. Study 3, presented in this chapter, addresses this and presents the findings of qualitative interviews with 20 expectant and new fathers who discussed their support needs in the perinatal period. This study was published as a peer-reviewed article in *Psychology of Men & Masculinity* (Quartile 1 journal, Impact Factor: 2.947).

Rominov, H., Pilkington, P., Giallo, R., & Whelan, T. (2017). "Getting help for yourself is a way of helping your baby": Fathers' experiences of support for mental health and parenting in the perinatal period. *Psychology of Men & Masculinity (in press)*.

## Statement of Contribution

I acknowledge that my contribution to the paper is above 60 percent.

Name: Holly Rominov

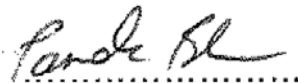
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## Abstract

**Background.** The need for services targeting fathers in the perinatal period is increasingly apparent. To maximize engagement, such interventions need to be father focused, but men's experiences and needs around support have not been adequately examined. Therefore, the aims of this qualitative study were to explore men's experiences of seeking support for their mental health and parenting in the perinatal period, and identify their specific support needs during this time.

**Method.** Australian fathers ( $N = 20$ ) who were expecting or parenting an infant less than 2 years of age participated in individual semi-structured face-to-face or telephone interviews. Thematic content analysis was used to analyse the data.

**Findings.** Five broad themes were explored: experiences of support, support needs, barriers to support, facilitators to support, and timing of support. Several subthemes were identified within each category, illustrating a diverse range of issues that fathers experience across the perinatal period.

**Conclusions.** The findings have implications for our understanding of fathers' help-seeking behaviours, their perinatal support needs and for the development of resources, services, and interventions aiming to engage fathers in maternity health services.

**Keywords:** Father; perinatal; help-seeking; support; barriers; facilitators

## Introduction

The extent to which men invest in their identity as fathers varies according to several factors, such as personal family history, socio-economic status, education, relationship status, and cultural background (Bronte-Tinkew et al., 2006; Carrington, 2013). For men who are biological fathers and reside in the same home as their children, opportunities to invest in the identity and role of a father are considerable. In industrialized, Western cultures, a shift in societal beliefs about gender roles and parenting has contributed to the increasing involvement of these fathers during all stages of the perinatal period (i.e., pregnancy through to 12 months postpartum), including antenatal appointments, the labour and birth process, and early parenting responsibilities (Dette-Hagenmeyer et al., 2014; Genesoni & Tallandini, 2009). There is growing recognition of the unique contribution that fathers make to the family system, including being an integral support to their partner (Pilkington, Milne, et al., 2015), and having the potential to significantly impact their children's development, independent of mothers (Giallo, Cooklin, Wade, et al., 2013; Lamb, 2010; Rominov, Giallo, et al., 2016; Wilson & Durbin, 2010). As such, it is essential that men are supported in their role as a father. However, fathers' experiences of support and their support needs in the perinatal period are not well understood. Using data from qualitative interviews with expectant and new fathers, the current study sought to address this gap by exploring Australian men's experiences of seeking support and their support needs during their transition to fatherhood.

The key stages of the perinatal period represent distinctive transitional phases for men's psychological wellbeing. For example, several longitudinal studies have described the prenatal stage to be the most distressing of the perinatal stages for men, due to the intense psychosocial reorganization that occurs during this time (Buist et al., 2003; Condon et al., 2004; Ramchandani et al., 2008). The labour and birth phase represents a time of intense and mixed emotions for new fathers, which can range from joy, excitement, pride, and love, to anxiety, fear, horror, and helplessness (Greenhalgh et al., 2000; Hallgreen et al., 1999). For some fathers, witnessing a traumatic birth can result in lasting negative emotional experiences that can have serious consequences for their relationships and families (White,

2007). During the postnatal stage, the formation of a triadic family relationship can present several challenges for fathers. For example, balancing the demands of work with new responsibilities at home can result in men feeling torn between desiring increased participation in early caregiving tasks, and providing for the family (Cooklin et al., 2015). The experience of fatigue can be a significant challenge for new fathers; it has been reported that higher levels of fatigue are associated with irritability and low mood, interpersonal difficulties, decreased tolerance and patience with children, and increased difficulties concentrating at work (Giallo, Rose, et al., 2013). Other difficulties that fathers have commonly reported during the postnatal stage include adapting to the presence of an infant who commands priority from the mother (Bartlett, 2004), low perceived competence in infant care skills (Buist et al., 2003; Henderson & Brouse, 1991), difficulty adjusting to a restricted sense of free time to pursue social friendships and hobbies (Buist et al., 2003; Condon et al., 2004), and frustration with a decline in sexual activity with their partner (Williamson et al., 2008).

The increased demands on men's psychological resources during each stage of the perinatal period increase their vulnerability to mental health issues. For example, a recent systematic review of the prevalence and course of anxiety disorders in men across the perinatal period reported rates to be between 4.1% and 16% during the prenatal period, and 2.4% to 18% during the postnatal period (Leach et al., 2016). A meta-analysis of paternal perinatal depression has reported prevalence rates between the first trimester and one year postpartum of 10.4% (Paulson & Bazemore, 2010). The prevalence of depression in fathers is even higher among those whose partners experience perinatal depression, ranging from 24 to 50% (Goodman, 2004). Fathers' perinatal mental health problems can create strain on the couple relationship, and significantly impact children's emotional, social, and cognitive development and well-being (Buist et al., 2003; Connell & Goodman, 2002; Giallo, D'Esposito, et al., 2013; Ramchandani et al., 2005; Ramchandani et al., 2008). Consequently, it is critical for fathers to be adequately supported in relation to their emotional health and their role as a parent during the perinatal period. Nonetheless, research has identified that fathers often feel excluded and unsupported by health care professionals

during the transition to parenthood (Dolan & Coe, 2011; Fenwick, Bayes, & Johansson, 2012; Widarsson et al., 2012), and are tending not to access or fully utilize family-related support services in the perinatal period (Fletcher et al., 2014).

Literature focusing on fathers' engagement in health services cites several contributing factors. For example, the socialisation of gender roles plays a significant part in men's help-seeking behaviours (Addis & Mahalik, 2003; Mansfield et al., 2003). Men may perceive help-seeking as challenging conventional notions of masculinity, which include self-reliance, toughness, and an emphasis on emotional control (Levant, 2011). As described by the gender role strain paradigm, violating such norms by seeking support could lead to perceived condemnation from others (Pleck, 1995). At a policy level, social benefits such as the provision of parental leave, are often female-oriented, with little focus on men's roles (Alio et al., 2011). At a practice level, service culture can exclude and marginalize fathers due to the traditional emphasis on women as primary carers of children (Alio et al., 2011; Fletcher et al., 2012). Consequently, barriers to father engagement in the perinatal period include masculine stereotypes, health professionals' lack of skill and confidence to engage men about their mental health, few opportunities for men to relate to other males, a focus on medical information pertaining to the mother and baby, information not being presented when most needed, and an inflexibility of service formats (Bayley et al., 2009; Berlyn et al., 2008; Fletcher et al., 2014; McElligott, 2001; Panter-Brick et al., 2014; Polit & Beck, 2008; Rominov, Pilkington, et al., 2016; Wilhelm, 2009).

Given these factors, it is imperative for research to explore fathers' experiences of support and their support needs in order to facilitate their engagement in appropriate perinatal services. Indeed, the World Health Organisation (2015) recently declared that engaging with fathers is a priority for all maternal and newborn services around the world. There have been calls for in-depth, qualitative interview approaches in father research, to develop a richer understanding of men's experiences of the transition to parenthood (Marsiglio et al., 2000). Despite this, only a small number of qualitative studies have reported on fathers' support needs, with a predominant focus on fathers in the antenatal period



(Deave & Johnson, 2008; Poh et al., 2014; Rowe et al., 2013; Widarsson et al., 2012).

Further qualitative investigation regarding fathers' support needs across all stages of the perinatal period is required. In particular, support needs relating to both parenting and mental health need to be explored, as these are interrelated aspects of a new father's parenting experience (Sevigny, 2013; Sevigny & Loutzenhiser, 2010). Listening to the personal narratives of fathers about their experiences of support and their support needs is critical for informing theoretical frameworks of fathers' help-seeking behaviours, as well as informing policy, health care services, and resources aimed at supporting fathers in the perinatal period. The aims of this study, therefore, were to explore fathers' experiences around seeking support for their mental health and parenting during pregnancy and the early parenting period. This was achieved by addressing the following research questions: 1) What are expectant and new fathers' experiences around accessing resources and support for mental health and parenting? 2) What are fathers' specific support needs during the perinatal period? 3) What are fathers' perceived barriers and facilitators to accessing resources and support?

## **Method**

### **Study Design**

This research employed a descriptive qualitative approach, which enables straightforward and unembellished descriptions of phenomena that have particular application to practitioners and policy makers (Sandelowski, 2000). The study was approved by the Human Research Ethics Committee of Australian Catholic University (reference: 2015-131E). An online webpage was developed that provided details of the study, as well as a link to a registration form where fathers could provide: a) their consent to participate; b) demographic information to confirm eligibility; and c) contact details.

### **Participants**

A convenience sample was recruited via snowball sampling, utilizing word-of-mouth and online advertising (e.g., social media parenting groups). Eligibility criteria required that fathers were 1) at least 18 years of age; 2) expecting a child or parenting a child less than

two years of age; and 3) currently married or in a de facto relationship. The age cut-off was selected given the specialized needs of adolescent fathers (Bunting & McAuley, 2004; Elster & Lamb, 2013; Fagan, Bernd, & Whiteman, 2007). Additionally, during the early parenting years 81% of parents are in a couple relationship (Australian Bureau of Statistics, 2016), therefore this study sought to identify the support needs of partnered fathers. Single fathers or fathers who do not live with their children are likely to have different support needs (Flood, 2003).

Participants were invited to partake in 30-minute individual face-to-face interviews to be conducted at a metropolitan university campus in Melbourne. Four fathers registered and attended face-to-face interviews. A number of fathers expressed interest in the face-to-face interviews, but were unable to schedule a suitable time. The research team reflected on how face-to-face interviews are a common barrier to fathers' participation in parenting programs and research (Bayley et al., 2009). Subsequently, it was decided to conduct telephone interviews and 16 fathers registered to participate via this method. There has been a growing interest in the use of technology-assisted qualitative interviews in psychology research, with reports of telephone interviews being a suitable method of qualitative data collection (Carr & Worth, 2001; Novick, 2008; Sturges & Hanrahan, 2004). Specific to family research, a study by Kirsch (2002) highlighted telephone interviews as a successful method by which to engage fathers.

The final sample consisted of 20 fathers. Demographic information of the sample is presented in Table 1. All participants were Australian residents, partnered and in paid employment. Fathers had a mean age of 33.9 years, with ages ranging from 30 to 42 years. The sample included first time expectant fathers, fathers who were parenting a child and expecting another baby, and fathers parenting an infant less than 24 months. Notably, one-fifth of the fathers ( $n = 4$ ) lived in a rural location. The majority of fathers ( $n = 13$ ; 65%) had completed an undergraduate degree or higher.

**Table 8.1.** Participant characteristics

Demographics ( <i>N</i> = 20)	<i>n</i> (%)
Father age in years*	33.9 (3.2)
First time expecting baby	5 (25%)
Already parents and expecting baby	7 (35%)
Parenting infant under 24 months	8 (40%)
Geographical location	
Metropolitan	16 (80%)
Rural	4 (20%)
Highest level of completed education	
Postgraduate degree	4 (20%)
Undergraduate degree	9 (45%)
Technical certificate	1 (5%)
Year 12	4 (20%)
Year 10	1 (5%)
Year 9	1 (5%)

\*M (SD)

### Data Collection

The 30-minute face-to-face and telephone interviews were conducted over a one-month period. The majority of telephone interviews were conducted after business hours. All interviews were facilitated by the first author using a semi-structured interview protocol, designed to elicit information from the participants about seeking support for parenting and mental health in the perinatal period (Table 2). The guide was used in a flexible manner, in response to the direction in which the fathers wanted to take the interview. All interviews were audio recorded. Confidentiality was maintained by ascribing participant numbers to all audio files, transcripts, and subsequent analysis documents.

Guided by Finlay and Gough (2008), reflexivity was addressed by the research team through a discussion of the impact of researcher context and subjectivity on project design,

data collection and data analysis. For example, any personal attitudes or biases towards the research topic were discussed in order to facilitate transparency of the research process. We also considered the possible impact of having a female facilitator of the interviews. An examination of the literature indicated that father-focused research and services do not need to be facilitated by men to be effective (Fletcher, 2008; Liu, 2005). Rather, “working effectively with men means an awareness of masculine cultural values and the clinician’s understanding of his/her own assumptions and biases about men” (Liu, 2005, p. 685). Guided by this, we decided that it was appropriate for the female primary investigator to conduct the interviews. The facilitator acknowledged her subjectivity to the participants as a female not currently parenting an infant. Additionally, she reviewed literature pertaining to masculine values and men’s help seeking behaviour prior to conducting the interviews, and used a peer-debriefing strategy throughout the interview process by discussing emerging themes and personal reactions to the interviews with the research team.

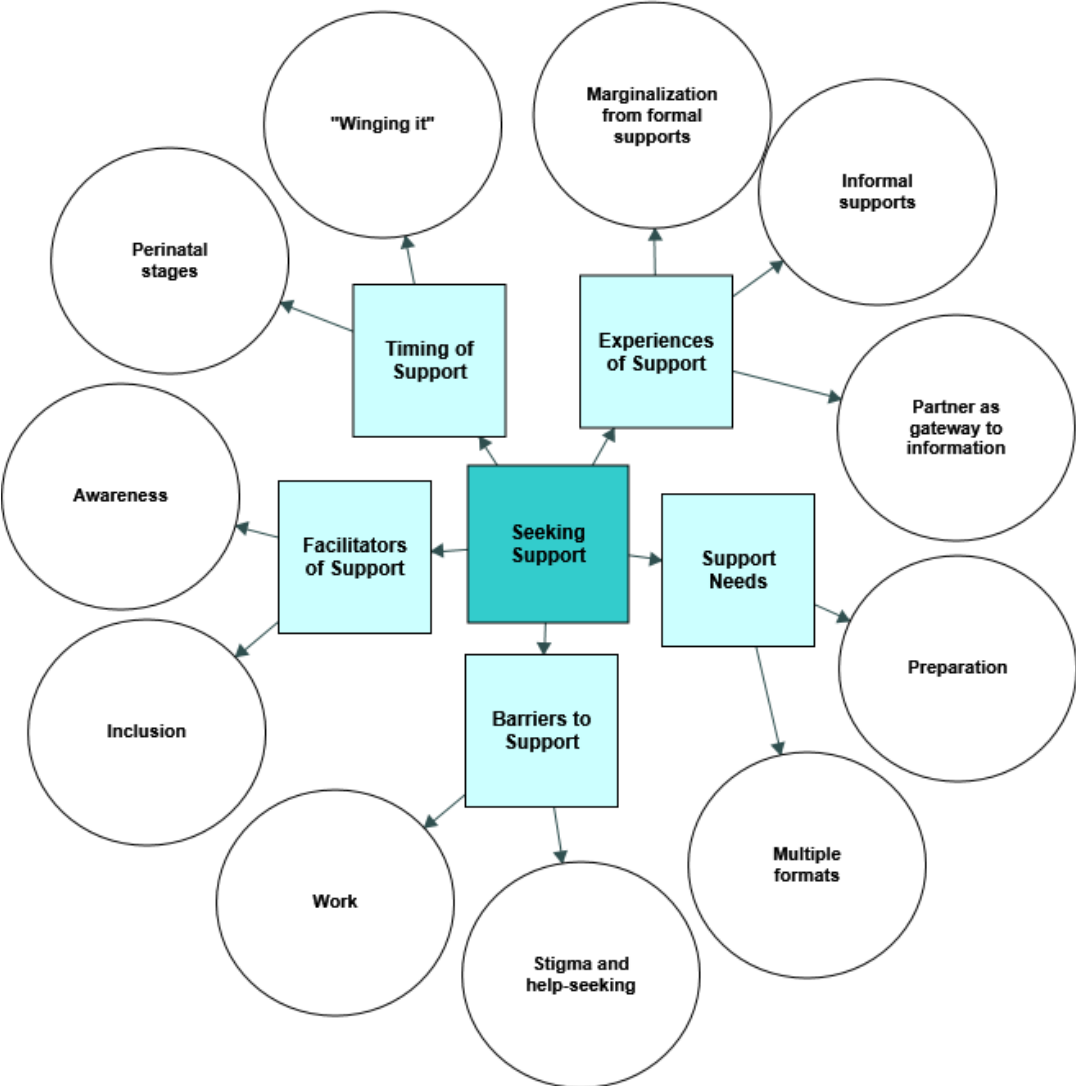
### **Data Analysis**

All interviews were transcribed verbatim by a professional transcription company. To begin, each transcript was read through several times to develop a sense of content. Using qualitative software *NVivo10* (QSR International, 2012), the data were organized using semantic thematic analysis as outlined by Braun and Clarke (2006). Initial codes for the data were generated, before being collated into meaningful themes. To increase trustworthiness, two of the authors with experience in coding qualitative data independently conducted the analyses. The two data coders compared results and integrated their respective coding frameworks. To further aid reflexivity, theme and subtheme definitions and content were discussed with the whole research team until consensus was reached on how to represent the data.

### **Findings**

A thematic map of the analysis was developed (Figure 1), which outlines the final definitions and names for the subthemes associated with each broad area of inquiry relating to seeking support for parenting and mental health in the perinatal period: 1) experiences of

support; 2) support needs; 3) barriers to support; 4) facilitators of support; and 5) timing of support. Several subthemes emerged within each of these categories, which are discussed below in conjunction with representative quotations from the participants. The quotes are referenced by fathers' metropolitan or rural status, and the perinatal stage that the father was experiencing.



**Figure 8.1.** Thematic map of key themes of fathers' support needs during the perinatal period.

**Theme 1: Experiences of Support**

An important objective of this study was to identify the types of resources and supports that fathers access for their emotional health and parenting across the perinatal

period. We found that fathers spoke about their experiences of both formal and informal supports, and reflected on the role that their partner played in accessing information.

*Subtheme 1.1: Marginalization from formal supports*

The fathers discussed accessing support from a variety of health professionals and services, such as obstetricians, midwives, Maternal Child Health Nurses, General Practitioners, antenatal classes at hospitals, home-visiting nurses and infant first-aid classes. These sources were utilized primarily in relation to information and support for parenting knowledge and skills, as compared to mental health support. Despite identifying these avenues of support, several fathers acknowledged that contact with health professionals and services were generally infrequent. For example:

*I went to one meeting with the maternal health nurse which I think was one of our first meetings but I haven't seen her since. (Father 11, metro, already parenting and expecting a baby)*

Additionally, the paucity of father-specific support from these sources was discussed by the majority of the fathers. They described how they felt that their role as a co-parent was not acknowledged well enough in the health care system, resulting in feelings of marginalization. For example, a perceived lack of father-specific information in antenatal classes was discussed by one father:

*I definitely would have gone to classes that a hospital ran that were just for dads. (Father 3, metro, already parenting and expecting a baby)*

Another father reflected on how mother-centric language in written resources, such as pamphlets, did not provide enough detail about father experiences:

*There was a little pamphlet that the hospital provided around postnatal depression. That was mainly targeted at the mum...it did also mention that dads can get it, but that was it. There wasn't a lot of information or any real education about it. (Father 8, metro, parenting infant)*

One father noted that the attitudes of some health professionals generated feelings of exclusion as a co-parent:

*The doctors and nurses aren't necessarily keyed towards you as a dad...Maybe that's partly a social stereotype that you're not going to be the main caregiver. (Father 16, rural, already parenting and expecting a baby)*

#### *Subtheme 1.2: Informal supports*

There was a preference among the fathers to seek support for both parenting and mental health from more informal sources, such as friends, family, work colleagues, and online information. Seeking support from friends who were also fathers was the most common source of support discussed. The following passages are examples of this:

*If I was having an issue, I may have a discussion with my closest mates who were going through similar situations. (Father 6, metro, parenting infant)*

*I think it's [connecting with other dads] something that is good, even if it's just to kind of share experiences and get reassurance that that's kind of their experience as well. As a dad, it's probably not something that you formally get. (Father 16, rural, already parenting and expecting a baby)*

The fathers discussed how informal conversations about their general emotional wellbeing and parenting experiences with people they felt close to facilitated their access of resources and/or support if needed. All fathers unanimously expressed gratitude for the emotional and practical support they receive from their social networks.

#### *Subtheme 1.3: Partner as gateway to information*

The role that partners play in the identification and dissemination of information during the perinatal period was discussed by the majority of fathers. Fathers acknowledged that their partners often took the initiative in seeking out information and then passing it on to them. For example:

*My wife spoon-fed me a fair bit, a lot of the stuff. I can't say I would've actually been proactive enough to do it myself. (Father 3, metro, already parenting and expecting a baby)*

*My wife has looked up a lot...she's subscribed to a lot of online blogs and things like that, and articles which she sends to me. (Father 15, metro, already parenting and expecting a baby)*

Fathers also discussed that the decision to access support services, such as perinatal appointments with health professionals or early parenting centers, was often made by their partner. This reflects the general attitude of “mother knows best”, which was raised by several of the fathers.

## **Theme 2: Support Needs**

Identifying specific support needs relating to fathers' emotional health and parenting was another key objective of this study. Open ended questions about fathers' level of interest in accessing resources and support and how they would like to access this led to the identification of several areas where fathers wanted more information in order to feel better prepared. Additionally, the importance of multiple formats in which to access resources and support was recognized.

### *Subtheme 2.1: Preparation*

Fathers identified several areas where they felt they had not received adequate information or support from perinatal services in their preparation for fatherhood. For example, the significant impact of sleep deprivation and fatigue on one's physical and emotional wellbeing was discussed by all fathers who were already parenting an infant. Fathers admitted to not feeling adequately prepared for such exhaustion and lamented the lack of information they received about this topic. The following passages illustrate this:

*Receiving information on the emotional support side, it was not as thorough...just that stuff of the effect the exhaustion can have on you and your mindset, and how you actually do things...I think there was a gap there about preparing ourselves for that, and being on such a steep learning curve with actually how to care for a baby whilst you're in such incredible fatigue. (Father 3, metro, already parenting and expecting a baby)*



*It's the constant broken sleep. You just feel it in your chest, like you're just melting when you're so tired. Yeah, probably needed a little bit more detail around that, so we could've been prepared for it a bit better.* (Father 15, metro, already parenting and expecting a baby)

Needing support during the very early stages of pregnancy was also discussed. For several fathers, finding out that their partner was pregnant was a time of excitement, but also a time fraught with worry. Fathers discussed wanting more information about this stage of pregnancy, as well as additional support for their emotional wellbeing, due to the sense of uncertainty in the first trimester. The “secrecy” of early pregnancy made one father feel like he was not able to seek support:

*...when you first find out that you're pregnant, what sort of information and support is available? People don't talk about it, you're not meant to say anything. That was a struggle for me.* (Father 18, metro, expecting first baby)

Needing additional support for when things did not go to plan was discussed by several fathers. For example, for one father, his partner's experience of hyperemesis gravidarum during pregnancy resulted in significant strain on his emotional wellbeing. This father described a sense of helplessness, and became acutely aware of the lack of support for fathers in this situation. The following passage illustrates the tone of this:

*My wife has that severe morning sickness. For me, it probably would be worthwhile having some support, especially going through a really tough pregnancy. I know there are people who love being pregnant and the whole family loves it, but not us! It's great that we know there is a baby coming, obviously, but during it, it's pretty brutal.* (Father 1, metro, already parenting and expecting a baby)

Several fathers became notably animated when discussing the pressure that their partners felt from health professionals to breastfeed. These fathers unanimously agreed that breastfeeding is the ideal situation, but also discussed several factors that can make breastfeeding an unmanageable option for their partner. A lack of information and support

about alternatives to breastfeeding, and how to support their partner in this process, was identified as a significant gap for fathers. As one father stated:

*When our son was born, the breastfeeding didn't quite kick off, and I had to go to the chemist to get the express stuff, and the bottles, and all of that. Hospital staff – couldn't you have just had a brochure or pamphlet, or as part of the classes to tell us that we should go and get all of that stuff beforehand just in case? That really would've taken a lot of the stress out of it. My wife was in no state to go to the chemist herself, so I was up there trying to do all of this stuff. I didn't know what I was doing. (Father 3, metro, already parenting and expecting a baby)*

Information and support around infant attachment and bonding was discussed by one father, who disclosed that it took several months to adjust to the presence of his baby and feel emotionally connected. He reflected on the pressure he felt to “love” his baby immediately, and felt ashamed that he did not feel an immediate bond. For this father, a lack of information and support about this experience contributed to his difficulties. The following quote captures his sentiments about this topic:

*I think from a male perspective, it can take a little bit of time to build that bond with your baby. I guess more awareness, preparation or letting the dad know that potentially, you are not going to have that bond the same as the mother does initially, and it can potentially take a month, or six months, or maybe even longer. (Father 6, metro, parenting infant)*

The challenges of knowing what information is reputable were highlighted by the majority fathers, who felt that living in the “Information Age” presented both opportunities and difficulties in the context of parenting. The fathers discussed how conflicting messages online and in books about pregnancy, birth, and parenting were overwhelming at times. A desire to know what resources were reputable was an important support need for fathers. As articulated by one father:

*There are just so many things out there, which is a good thing, but also there is so much out there that you are like, “Which ones do I go to? Which ones are reputable?”*

*For a first time parent, it can be a little bit overwhelming. (Father 8, metro, parenting infant)*

Finally, several fathers expressed uncertainty regarding how to manage changes in relationship dynamics. Fathers identified a need for resources and support about communication skills, expressing their needs, managing conflict, and time management to help navigate these changes. The following passages illustrate this; the first quote discusses the couple relationship and the second quote highlights dynamics in extended family relationships:

*It would have been good to know that support that would be there for a father that has had his wife/girlfriend to himself for so long and then all of sudden they've got a baby that shifts the attention... I had a little bit of an issue with it, not resentment or anything but ... it does change quite a lot. (Father 5, rural, already parenting and expecting a baby)*

*I did struggle a lot with my in-laws. They were super keen to be involved, and my partner's mum in particular wanted to come in and be the super grandmother and do everything. But I wanted to be the dad. Maybe if there were sessions run by a professional that kind of had experience talking to grandparents, that would probably have been quite useful. (Father 8, metro, parenting infant)*

#### *Subtheme 2.2: Multiple formats*

As well as identifying particular topics that they would like additional resources and support for, fathers expressed preferences for a multitude of formats in which to receive information and support. Examples included father's groups, antenatal classes being facilitated by a father, services being provided outside of normal business hours, visual demonstrations, online information, and hard copy resources. The following quotes illustrate these:

*I think it's definitely critical for the mums to have that [mother's group], but dads would probably get something out of that too. (Father 2, metro, already parenting and expecting a baby)*

*I guess specifically [having antenatal classes] with someone who could share that experience like a father. Someone who has been through it so, provide a lot of trust in the idea that someone has come out the other side of this. (Father 13, metro, already parenting and expecting a baby)*

*If there were things that required face-to-face attendance, outside of normal office hours would be a big help. (Father 4, metro, expecting first baby)*

*Visual demonstrations please! (Father 16, rural, already parenting and expecting a baby)*

*From an information perspective... a single [face-to-face] session and then have stuff online that us Dads can read. (Father 2, metro, already parenting and expecting a baby)*

*Hard copy, something we could hold onto, flier, fridge magnet, things like that. (Father 8, metro, parenting infant)*

Requests for multiple formats were indicative of fathers' interest in accessing resources and support. Overall, however, fathers felt that they were not always able to access information or services in a format that best suited their learning style and needs.

### **Theme 3: Barriers to Support**

Another important objective of this study was to explore factors that can make it difficult for fathers to access resources and support for their emotional health and parenting

during the perinatal period. Two key barriers emerged from the interviews, stigma associated with men's help-seeking and inflexible work arrangements.

### *Subtheme 3.1: Stigma and help-seeking*

The negative stigma about men's mental health and help seeking was discussed by the majority of fathers. This stigma emerged from the fathers' own beliefs as well as from perceptions of external attitudes about masculine norms. The fathers tended to report that they would feel comfortable seeking out resources and support for parenting challenges (e.g. infant sleep issues), but would be hesitant to seek support for their emotional wellbeing as it could be interpreted as a sign of "weakness". Additionally, fathers indicated they would not want to shift the focus away from the wellbeing of their partner and baby by "complaining" about their mental health. Despite utilising friends for support, most fathers acknowledged they would be cautious discussing more significant mental health concerns due to stigma. For example:

*[mental health concerns]...it's not something I'd probably confide in friends because of the stigma attached. (Father 12, metro, expecting first baby)*

One father discussed the challenges of opening up about mental health issues when living in a small town. He described feeling uncomfortable discussing his emotional wellbeing around people he knows:

*When we had our antenatal classes, they...just had a blokes thing to try and get us to talk about our emotions which didn't really go that well. I think it was more the fact that because we're in such a small country town, we all know everybody, so that really didn't help. Like, there are blokes that you're playing footy against, and blokes that you work with. Nobody wants to open up to what they wanted us to in those circumstances. (Father 10, rural, parenting an infant)*

Another father highlighted the impact of the negative stigma around fathers' emotional health and help-seeking. He discussed how the use an external motive for seeking support could make help-seeking more "acceptable" for fathers:

*....re-framing the whole thing as, by getting help for yourself is a way of helping your baby might be a good way of going about it. (Father 19, metro, expecting first baby)*

#### **Subtheme 3.2: Work**

Inflexible work arrangements were a significant barrier for fathers accessing resources and support during the perinatal period. The majority of perinatal services operate during business hours, and fathers described how this made it difficult for them to attend appointments and engage with support services due to their work commitments. Additionally, fathers felt that limited paternal leave from work restricted their capacity to engage with their parenting role. For example:

*I mean, I think any first time father will say that two weeks after birth, you're barely waking up to the idea that anything is going on. I think a month would be much better...preferably longer. (Father 13, metro, already parenting and expecting a baby)*

Fathers also described feeling frustrated by a lack of acknowledgement in the workplace about fathers being co-parents and the requirement for flexibility at work to help to care for their children:

*I strongly believe in the idea that there is expectation that dad is separate, that it's not their issue. Even just sick days. There's expectation that looking after the kids always seems to be the mother's obligation and, even in a relatively flexible and family friendly work place, it's still a kind of male negativity towards fathers taking the day to care for sick kids. (Father 2, metro, already parenting and expecting a baby)*

### **Theme 4: Facilitators of Support**

As well as exploring barriers to fathers accessing resources and support, this study also explored the factors that facilitate their access. Two key themes that emerged from the interviews were notions of inclusion and awareness.

#### **Subtheme 4.1: Inclusion**

Fathers expressed a desire to be more included in perinatal resources and support services, through recognition of the importance of the father role. For example, several fathers discussed how the incorporation of father-specific information into standard antenatal

classes would facilitate their receptiveness to information, and encourage them to become more involved. As one father stated:

*I guess if you're attending them [antenatal appointments] as a couple...it would be good if it was more of an inclusive thing, if I mattered too. (Father 13, metro, already parenting and expecting a baby)*

Similarly, a father described how being actively engaged by health professionals was a positive experience in terms of utilising a perinatal service:

*Some [health professionals] have been more keen on us, including me, asking questions and bringing up issues, rather than them driving the appointments. I definitely think that has been good. (Father 19, metro, expecting first baby)*

A desire for more inclusion and engagement by health professionals was discussed as a strategy to facilitate access to resources and support:

*It would be good if the maternal health nurse goes through the things from the dad's perspective, how you may be emotionally. (Father 6, metro, parenting infant)*

One father discussed how some parenting resources should review their language when presenting information, in order to be more father inclusive. As he stated:

*A number of the books I've been reading have, which I find somewhat demeaning, have little grey breakdown boxes for the fathers. As if, "The man is only going to read this summary." (Father 19, metro, expecting first baby)*

#### *Subtheme 4.2: Awareness*

Several fathers acknowledged their lack of awareness about the availability of support during the perinatal period. They discussed how a heightened awareness would facilitate their engagement with resources and support services. For example:

*Probably just knowing about it [available support]...we have some support mechanisms available through work...but this conversation has triggered my memory around that. It's not really front of mind that I have that resource. (Father 1, metro, already parenting and expecting a baby)*

Several fathers said that they had assumed that most perinatal resources and support services were targeted towards the mother and baby, and so they lacked awareness of father-specific supports. Targeted campaigns, health professionals, and perinatal services can actively reach out to fathers in order to facilitate awareness of the available resources and supports. One father suggested several examples of how this could be achieved:

*I guess it's about adequately signposting that there are services available in the moments where they might be needed. If it is a phone call, it's part of that phone call being "Oh, we also have a drop-in center," or "Oh, you can also go here and speak to someone face-to-face. Here are the dad's groups or whatever you can join and chat to other fathers." Making those options obvious and accessible is needed. (Father 19, metro, expecting first baby)*

## **Theme 5: Timing of Support**

### *Subtheme 5.1: Perinatal stages*

Fathers identified varying support needs during the different stages of the perinatal period. For example, during the antenatal period, fathers discussed how they were most interested in resources about supporting their partner during pregnancy, and information pertaining to the wellbeing of their unborn baby. Fathers described being less receptive to information that was not related to the antenatal period, such as infant caregiving. Some fathers described wanting additional support to help manage their concerns about this stage. For example:

*One of the things that sits in my mind...potential for problems during birth, and potential for problems straight after birth with the newborn child...that's the information that I find is lacking in the pre-birth phase. (Father 4, metro, expecting first baby)*

For fathers that were already parenting an infant, labour and birth resulted in various emotional experiences, and they highlighted the need for additional resources and supports about emotional wellbeing. For example, one father described how witnessing his partner give birth prompted his need for support:



*I reckon that was probably the most stressful part of my life, was the actual birth, I was pacing up and down the room then. It's a horrifying experience, everyone thinks it's beautiful, I think it's bloody horrifying.* (Father 7, metro father, parenting infant)

Several fathers perceived that many of the available perinatal resources and supports focus predominantly on pregnancy and birth. These fathers described a need for additional support in the early parenting period to assist with the multitude of challenges a newborn baby brings, such as developing a sleep routine, coordinating work schedules, renegotiating social commitments, and managing changes in the couple relationship. The following passages highlight the need for support during this time:

*After the first couple of months with the baby...it's all really exciting. There probably comes a time when things maybe settle down a little bit, but it's still quite tough...potentially maybe at that point you could have extra support for dads.* (Father 20, metro, parenting infant)

*I encourage first time dads to go back to work after two weeks providing I guess your wife is managing okay. Then, in two months' time, taking the bulk of what leave available you have too, because at that time, two months down the track, things were tougher.* (Father 13, metro, already parenting and expecting a baby)

#### *Subtheme 5.2: "Winging it"*

The majority of fathers described accessing resources and support in a reactive manner, at times when there was a need to solve a particular issue or seek advice or support about a specific topic. The expectant fathers described feeling comfortable accessing resources about parenting "on the go", rather than actively preparing before their baby was born. For example:

*I feel like I'm going to be winging it a bit...I probably should have done some more research...but I'll see how it goes* (Father 12, metro, expecting first baby)

*As far as I'm concerned, I'm not really learning until it actually whacks me in the face.*

(Father 4, metro, expecting first baby)

When considering accessing resources and support for emotional wellbeing, fathers reflected on their lack of preparation for the emotional changes that can occur during the perinatal period and the tendency to only seek information if they were experiencing a significant challenge. As articulated by one father:

*You go for a run to stay fit, to maintain a basic level of fitness, but for your mental health, it's not as if there is any maintenance, is there? It's only when there is an injury that people would seek something out...* (Father 1, metro, already parenting and expecting a baby)

### **Discussion**

This study described a wide range of expectant and new fathers' experiences related to seeking support for their mental health and parenting. Fathers described wanting to be involved, but tended to feel frustrated and marginalized by their experiences with formal perinatal resources and services due the mother-centric focus, and preferred to access resources and support via their partner and informal social networks. Additional information about particular topics to help fathers feel prepared and a desire to access resources and support via multiple formats were identified as specific support needs for fathers. Discussions about inflexible work arrangements and the stigma that many men experience in relation to seeking support highlighted important barriers to fathers' help-seeking behaviour, particularly in the context of mental health. The importance of including fathers in the development and provision of perinatal resources and services, as well as strategies to facilitate fathers' awareness of available supports was also highlighted. Finally, fathers identified different support needs at different stages of the perinatal period, as well as a general preference to 'wing it' and seek resources and services reactively. These findings provide a more comprehensive understanding of Australian fathers' experiences of support and their support needs for their mental health and parenting than previous qualitative research has reported.

Fathers' interactions with health professionals and formal perinatal support services were generally infrequent, which is consistent with reports that fathers do not fully utilize perinatal support services (Fletcher et al., 2014). The importance of including fathers in perinatal services is becoming more recognised (Steen et al., 2012), which includes engaging fathers and providing them with relevant and accessible information for the multitude of psychosocial changes that occur during this time (McElligott, 2001). This is particularly pertinent due to the prevalence of fathers' perinatal mental health issues and the potential long term impacts of fathers' mental health problems on themselves, their relationships, and their children (Giallo, Cooklin, Wade, et al., 2013; Ramchandani et al., 2008; Rominov, Giallo, et al., 2016). Despite this, fathers in the present study described a lack of father-specific resources and a sense of being excluded from traditional mother-focused resources and models of care. Fathers also expressed a desire to be more involved and identified several strategies to facilitate their involvement and meet their support needs. These findings expand on previous studies reporting on fathers' support needs and experiences of antenatal care (e.g., Deave & Johnson, 2008; Poh et al., 2014; Rowe et al., 2013; Widarsson et al., 2012) by considering fathers' experiences across the perinatal period. Furthermore, this information adds to the literature on enhancing fathers' educational experiences in the perinatal period (e.g., McKellar, Pincombe, & Henderson, 2008). Targeted education is needed for primary health care professionals to respond to fathers' experiences of support and their specific support needs. In particular, the timing of providing support for fathers requires careful consideration by perinatal services to ensure that fathers' needs are being met at appropriate times. This is consistent with a recent strategic framework on fathers' mental health presented in a report by beyondblue (2015).

In the present study, fathers' preferences for informal sources of support such as family and peers, and the distinctive role that partners play in gathering and disseminating information to fathers, was clear. A commonly cited factor that contributes to fathers' perinatal mental health problems is difficulties pursuing and maintaining social friendships (Buist et al., 2003; Condon et al., 2004). Fostering peer support networks for fathers, such as

via antenatal classes for fathers or first-time parents groups, can be a strategy to capitalize on fathers' preferences for seeking support, as well as a way to address a common challenge for new fathers. Additionally, encouraging partners to attend perinatal appointments together will give health professionals more opportunities to engage fathers, which can also address fathers' desires to be more included.

Fathers in the present study indicated that they were receptive to new information relating to parenting and mental health, however they tended to learn as they went along, seeking out practical information in response to the perinatal stage and their specific situation. The tension between fathers' desires to be more included and their tendency to "wing it" and seek information and support reactively points to the importance of perinatal services promoting their resources and supports to fathers and actively engaging them. This also aligns with fathers in the present study describing how a greater awareness of available resources and support would facilitate their access and engagement.

Another theme that emerged in this study was the negative stigma and attitudes that many fathers face about mental health and help seeking. Fathers who were experiencing stigma, whether internally or from perceptions of external attitudes were less likely to engage in perinatal services. This is consistent with the gender role strain paradigm (Addis & Mahalik, 2003; Levant, 2011; Pleck, 1995), in that the violation of gender role stereotypes for men may lead to negative evaluations from others. Avoidance or a lack of engagement with health services could be a strategy for fathers to avoid such stigma. A literature review of men and help-seeking behaviour reported that this is of particular relevance to Caucasian middle class men (Galdas et al., 2005), which is consistent with the sample of the present study. Perinatal health professionals need to be aware of this "masculine socialisation" and tailor perinatal services and health promotion messages accordingly.

Fathers in this study also described how inflexible working conditions and limited time off after their baby is born contributes to their lack of engagement in perinatal services. Workplace inflexibility is consistently cited as a significant barrier to father engagement (Fletcher et al., 2014), and is associated with increased distress in new fathers (Cooklin et

al., 2015). Building awareness amongst employers and peak industry organizations about fathers' support needs will assist in maintaining healthy fathers by providing an environment where seeking support is accessible, and more importantly, accepted.

### **Study limitations and directions for future research**

We acknowledge that the fathers who participated in this study were a relatively homogenous sample and so the findings are not likely to be applicable to culturally and socio-economically diverse father groups such as teenage, refugee, or Aboriginal fathers (e.g., Hammond, Lester, Fletcher, & Pascoe, 2004). These differences in fathers' perspectives of support needs could be the subject of future research. Additionally, this research focused on fathers who were in a partner relationship. Further research is needed for other groups of fathers, such as fathers who do not live with their children, fathers with mental health problems, fathers from diverse cultural backgrounds, stay at home fathers, same-sex fathers, and single fathers. The methodology used in the present study can be replicated to listen to the voices of these fathers. Finally, future research could extend the findings of the current study by examining additional contextual factors such as fathers' ethnicity, past history of mental health difficulties, couple relationship quality, social support and family planning. Despite these limitations, this study has generated important information to assist in the development and provision of mental health and parenting support for fathers in the perinatal period.

### **Conclusion**

A descriptive qualitative approach allowed fathers in the current study to express their experiences and needs in their own words outside the constraints of questionnaires that dominate quantitative research. Listening to father voices via qualitative methods is a much-needed area of research in the context of family studies (Marsiglio et al., 2000) as well as in the development and provision of perinatal services. During the perinatal period, health professionals have several opportunities to engage fathers about their mental health and parenting (Burgess, 2007). Research has indicated that positive and authentic engagement from perinatal services has the potential to increase fathers' trust, decrease fear, and to

increase the chance of men seeing themselves as valued co-parents (Steen et al., 2012). In turn, this can support the overall mental health and wellbeing of fathers, their partners, and their children. Given that men's evaluation of fatherhood is often linked to their perceptions of available supports (Garfield, Clark-Kauffman, & Davis, 2006), it is essential to listen to and learn from fathers about their experiences and support needs in the perinatal period.

Conducting individual interviews in this study allowed fathers a private space to express themselves. This addressed a limitation of previous studies that interviewed fathers in groups, or together with their partners (e.g., Widarsson et al., 2012). The present study also provides support for employing telephone interviews as an effective way to involve fathers in family research. Notably, the majority of telephone interviews were conducted in the evenings and the fathers expressed their gratitude regarding being able to schedule a flexible interview time. This method addressed one of the key barriers to engaging fathers, that of time constraints during business hours (Bayley et al., 2009). This has implications for perinatal services to engage fathers in a way that overcomes such barriers, such as offering support services after business hours or via telephone. The increased sense of anonymity afforded by telephone or online services could also target fathers' potential concerns about help-seeking and masculinity.

Finally, this study identified specific support needs for fathers during the perinatal period. Whilst some studies have sought to better understand fathers' support needs, few have specifically explored this for fathers across different stages of the perinatal period. Being responsive to fathers' needs is critical for the development of resources, services, and interventions aiming to engage fathers and support their mental health and parenting during their transition to parenthood.

## **Chapter 9: Midwives' perceptions and experiences of engaging fathers in the perinatal period**

The study presented in the previous chapter explored fathers' experiences of support during the perinatal period. A key facilitator of support can be the active inclusion of fathers by health professionals. A strategy to inform the improvement of father-inclusive practice is to survey staff attitudes and experiences. This led to the development of a fourth study exploring the views of midwives working with fathers, which is presented in this chapter. This study was published as a peer-reviewed article in *Women and Birth* (Quartile 1 journal, Impact Factor: 1.696).

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## Statement of Contribution

I acknowledge that my contribution to the paper is above 60 percent.

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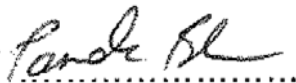
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## Abstract

**Background.** The active engagement of fathers in maternity care is associated with long-term benefits for the father, their partner, and their child. Midwives are ideally placed to engage fathers, but few studies have explored midwives' experiences of working with men. Therefore, the aim of this study was to describe midwives' perceptions and experiences of engaging fathers in perinatal services.

**Method.** A multi-method approach was utilised. Registered midwives ( $N = 106$ ) providing perinatal services to families in Australia participated in an online survey. Of these, 13 also participated in semi-structured telephone interviews. Descriptive analyses summarised the online survey data. The interview data were coded using semantic thematic analysis.

**Results.** Survey results indicated that midwives unanimously agreed that engaging fathers is part of their role and acknowledged the importance of receiving education to develop knowledge and skills about fathers. Analysis of the telephone interviews led to the identification of a range of strategies, facilitators and barriers to engaging fathers in midwifery services. Some of these were related to characteristics of midwives, factors related specifically to fathers, and several external factors relating to organisational policies.

**Conclusions.** Findings from this study could inform maternity health care policies, as well the development of resources, education and ongoing professional training for midwives to promote father-inclusive practice.

**Keywords:** fathers, engagement, maternity, midwifery, perinatal mental health

## Introduction

Over recent decades, expectant and new fathers have become increasingly involved in antenatal and maternal health care services. Today, many fathers see themselves as much more than just passive support persons for their partners during the perinatal period, the time encompassing pregnancy, labour, birth, and the first 12 months postpartum (Steen et al., 2012). Despite fathers' physical presence and desire for increased involvement, many high-resource healthcare systems tend to generate feelings of exclusion, fear, and uncertainty for fathers (Singh & Newburn, 2003; Steen et al., 2012; Widarsson et al., 2012), which can increase men's vulnerability to experience mental health problems. This is of concern, as a meta-analysis of paternal perinatal depression reported prevalence rates between the first trimester and 1 year postpartum of 10.4% (Paulson & Bazemore, 2010). Estimates of perinatal anxiety disorders in fathers are also high; a recent systematic review reported prevalence rates ranging between 4.1% and 16% during the antenatal period, and 2.4% to 18% during the postnatal period (Leach et al., 2016).

Although women-centred maternity care is essential, there is a need for more recognition of fathers in the provision of maternity services. This was recently acknowledged by the World Health Organisation who declared that engaging with fathers and families is a priority for all maternal and newborn health services around the world (World Health Organisation, 2015). In health literature, the term "engagement" is used to describe a positive, active relationship between a service/practitioner and a consumer (Fletcher, 2008). Engaging with fathers is synonymous with being father-inclusive, which refers to responding to the needs of families as a system by including fathers in all aspects of the planning and implementation of a service (Fletcher et al., 2014). Fathers are more likely to participate in labour and birth related appointments with their partner, compared to participation in other family-related services (Fletcher et al., 2014). Indeed, over 95% of fathers in industrialised nations attend the birth of their baby (Singh & Newburn, 2003). As such, midwives are ideally placed within healthcare systems to engage fathers, as they have several opportune

moments across the perinatal period where they are likely to have contact with men (Burgess, 2007).

Positive and authentic engagement from midwives that acknowledges fathers in the transition to parenthood, has the potential to increase fathers' trust, decrease fear, and increase the chance of men seeing themselves as valued co-parents (Steen et al., 2012). This can have a significant impact on fathers' perinatal mental health, which is associated with long-term psychological and social outcomes for the father, their partner, and their child. For example, fathers' psychological distress has been associated with less involvement in antenatal appointments, less responsiveness to infant cues, less involvement in child caregiving tasks, and increased parenting hostility (Giallo, D'Esposito, et al., 2013; Kane & Garber, 2004; Nicholas et al., 2012). This can result in impaired infant development (Kaplan et al., 2007; Murray & Cooper, 1997) and compromised family relationships (Don & Mickelson, 2012; Goodman, 2004; Hedin, 2000; Ramchandani et al., 2008). The active engagement of fathers in maternity care, therefore, aligns with recent calls for more father-inclusive approaches to perinatal mental health (Pilkington, Whelan, et al., 2015).

Several studies have explored fathers' perceptions of midwifery care, and have consistently reported higher levels of midwifery support to be a critical aspect that contributes to the positive transition to fatherhood for men. For example, Hildingsson, Cederlöf, and Widén (2011) surveyed new fathers ( $N = 595$ ) about their experiences of birth. The strongest factors associated with a positive birth experience for the father were midwife support and the midwife's ongoing presence in the delivery room. Similarly, a qualitative study ( $N = 11$  fathers) by Longworth and Kingdon (2011) indicated that the degree of communication between a father and midwife made a significant difference to the level of control and involvement that fathers felt at the birth. In turn, this influenced the fathers' positive or negative perceptions of birth events. Another qualitative study ( $N = 13$  fathers) described how fathers' sense of early postnatal security can be enhanced via engagement from midwives during the birth process (Persson, Fridlund, Kvist, & Dykes, 2012).

Despite these investigations into fathers' perceptions, few studies have explored midwives' experiences of working with fathers. Reed (2009) explored midwives' ( $N = 15$ ) views regarding fathers' involvement in antenatal screening processes for maternal diseases and foetal health. The midwives unanimously acknowledged the increased involvement of fathers, but their accounts highlighted the tensions between upholding women's reproductive autonomy and fathers' rights to be involved in the screening process, particularly if there were any concerns about domestic violence. Whilst of value, this study was limited by only exploring midwives' experiences working with fathers in one specific context. Hildingsson and Haggstrom (1999) also interviewed midwives ( $N = 7$ ) about their experiences of being supportive to prospective parents during pregnancy. Only one midwife mentioned working directly with fathers, reflecting on whether fathers who were absent from antenatal appointments were being sufficiently engaged by maternal services.

There is a clear need for research that explores midwives' perceptions and experiences of engaging fathers, particularly given the impact that midwifery care can have on a new father's transition to parenthood. As identified by several authors, a key strategy to improve father-inclusive practice is to survey staff attitudes and experiences (Berlyn et al., 2008; Fletcher et al., 2014; Maxwell et al., 2012). Therefore, the aim of this study was to describe midwives' perceptions and experiences of engaging fathers in perinatal services. Several research questions were explored: (1) To what extent do midwives see it as part of their job to engage fathers? (2) How do midwives' rate their knowledge, skills and confidence in engaging fathers? (3) What are midwives' perceptions of fathers' perinatal mental health problems? (4) What are midwives' perceived training needs to engage fathers? (5) What strategies do midwives use to engage fathers? and (6) What are midwives' perceived barriers and facilitators to engaging fathers?

## **Method**

### **Study design**

A multi-method approach was selected in order to provide a "fuller picture" (Hammond, 2005; p.239) of midwives' work with fathers. This involved using both an online

survey and telephone interviews. Initially, the research team collaborated in the development of survey questions aimed to gather data regarding midwives' perceptions of father engagement and father experiences (research questions 1-4; see Appendix I). Consensus was reached among the investigators about the face and content validity of the questions. The survey was piloted with a midwife who endorsed the content and language of the items. Telephone interviews were chosen to explore the strategies midwives use to engage fathers, and to discuss the barriers and facilitators of father engagement (research questions 5-6), as responses to these topics could not be covered in sufficient detail by the quantitative survey. A semi-structured interview guide was developed by the researchers for the telephone interviews (Table 1). The guide was used in a flexible manner, in response to the direction in which the midwives wanted to take the interview. The use of telephone interviews in psychology and health research is becoming increasingly popular, with evidence that telephone interviews are a valid and reliable method to collect qualitative data (Carr & Worth, 2001; Sturges & Hanrahan, 2004).

**Table 9.1.** Broad areas of inquiry and corresponding semi-structured interview questions

<b>Broad area of inquiry</b>	<b>Semi-structured interview questions and probes</b>
Strategies	What strategies do you use to engage (i.e. actively include) fathers in the services you provide?
Facilitators	<p>What makes it easier for you to engage fathers/use these strategies?</p> <p>What changes would you recommend to maternal health services, in order to increase father engagement?</p>
Barriers	<p>What makes it difficult for you to engage fathers?</p> <p>Are there particular groups of fathers who more difficult to engage? Why do you think this is so?</p>

## Procedure

An online webpage was developed that provided details of the study and a hyperlink to the questionnaire. Data collection occurred between May and July 2016. The survey was advertised by the Australian College of Midwives (ACM) via their weekly online newsletter (Australian College of Midwives, 2016), which is sent out to an estimated 5000 members (at the time of data collection). As indicated by the Administrative Officer at ACM, members include registered midwives, retired midwives, midwifery students, consumers, and other interested parties (e.g., researchers, other health professionals). The survey link was advertised in two ACM newsletters, circulated four weeks apart. To aid recruitment, the survey link was also emailed to 50 midwives registered on a publically available database (Eligible Midwives, 2006). Eligibility criteria required that midwives 1) be a registered midwife currently practicing in Australia; and 2) have 6 months or more experience working as a registered midwife (this period was selected to ensure that midwives had some opportunity to have contact with fathers).

Demographic data relating to age, gender, the number of years practicing as a midwife, average work hours per week, primary work sector (public or private) and the type of midwifery services provided were collected. The survey then asked respondents to rate a series of exploratory questions. Participants were invited to provide any additional comments in a free text box. Upon completion of the survey, participants had the option to download a copy of father-inclusive guidelines that focus on how partners can support one another during the perinatal period, as a professional resource to keep (<http://www.partnerstoparents.org/the-guidelines/>; Pilkington, Milne, Cairns, & Whelan, 2016). At the end of the survey, respondents were invited to participate in a 15 to 20 minute telephone interview to discuss questions about father engagement in more depth. If they agreed to the interview, participants were asked to provide their contact details. The telephone interviews were conducted by the first author, who acknowledged her subjectivity to the participants as a researcher in the context of psychology.

## **Ethics**

The study was approved by the Human Research Ethics Committee of the Australian Catholic University (#2016-73E). Completion of screening questions for the online survey was interpreted as informed consent. For the interviews, verbal consent was confirmed on the telephone, prior to commencing the interview. The interviewer conducted the interviews in a private room which facilitated the audio recording of each conversation. Confidentiality was maintained by ascribing participant numbers to all audio files and transcripts.

## **Data analysis**

Using the Statistical Package for Social Science (SPSS) Version 22.0, descriptive analyses such as frequency and percentage response distributions were conducted to summarise the online survey data. Responses from the free text box were used to highlight relevant survey results. The interviews were transcribed verbatim by a professional transcribing company. Using qualitative software *NVivo 10* (QSR International, 2012), the transcripts were coded using semantic thematic analysis, following the procedure outlined by Braun and Clarke (2006). First, the transcripts were read over several times to develop a sense of content. Initial codes identifying unique features of the data were then generated before being collated into meaningful themes. To increase reliability of the analyses, two of the authors independently conducted thematic analyses of all interviews, compared results and discussed the theme and subtheme definitions until consensus was reached. These were illustrated in a thematic map developed in *NVivo* (Figure 1). Results from the online survey are presented first, followed by findings from the qualitative analyses of the telephone interviews.

## **Results**

### **Participants**

A total of 106 midwives completed the online questionnaire. There was no missing survey data. Comments in the free text box were provided by 46 (43%) midwives. Response rates could not be calculated as it was unknown how many midwives who met the inclusion criteria received the study advertisement. Demographic information of the total sample is

presented in Table 2. The majority of respondents were female, with ages ranging from 22 to 64 years. The sample included midwives working in both public and private settings. The number of years working as a midwife ranged from 6 months to 37 years. On average, the midwives worked approximately 30 hours per week.

**Table 9.2.** Midwife characteristics (*N* = 106)

Demographics	
Gender	
Male	6 (5.7%)
Female	100 (94.3%)
Age in years <sup>1</sup>	46.0 (10.4)
Number of years practicing as a midwife <sup>1</sup>	16.1 (10.5)
Average hours per week practicing <sup>1</sup>	31.1 (10.7)
Provision of services	
Antenatal support	46 (43.4%)
Labour and birth support	82 (77.4%)
Post-natal support	54 (50.9%)
Neonatal care	31 (29.2%)
Home visits	47 (44.3%)
Phone support	46 (43.4%)
Other <sup>2</sup>	
Primary work sector	
Public	46 (43.4%)
Private	77 (72.6%)
	29 (27.4%)

*Note.* <sup>1</sup> Mean (SD); <sup>2</sup> Other services identified by midwives included pre-conception advice, homebirth, lactation consultant, and mother's group facilitator.



From the total sample that completed the online survey, 13 (12%) midwives also registered and participated in the telephone interviews, 12 female and one male. The mean age of this group was 48.6 years, with ages ranging from 27 to 61 years. The sample included midwives working in both public ( $n = 9$ ; 69.2%) and private ( $n = 4$ ; 30.8%) settings for an average of 31.9 hours per week. The average number of years working as a midwife was 18.2, with the amount of experience ranging from 1 to 30 years. This group was generally representative of the overall sample of midwives who completed the online survey.

### **Midwives' views about engaging fathers**

All participants agreed that actively engaging fathers is part of their role as a midwife. This was rated by majority of midwives (77.9%) as a *large part* of their role, by a further 20.0% as a *moderate part*, and by 2.1% as a *small part*. No midwives rated engaging fathers as a *minor part* or *no part* of their role. These results were reflected in the following statement:

*I feel very strongly that the more a father is engaged with, the better the parent-child bond will be with his baby, and hopefully this will help him feel more confident to team parent with his wife/partner (female midwife of 10 years)*

As presented in Table 3, the majority of midwives rated their knowledge and skills in engaging fathers as *good to very good*, and their confidence in engaging fathers as *very good to excellent*. Table 4 presents the extent to which midwives ask fathers about certain topics; midwives did this more in the context of parenting skills, compared to fathers' emotional wellbeing or the couple relationship. When asked to what extent they ensure fathers are taught new parenting skills such as bathing, changing a nappy, swaddling and settling, 51.6% of midwives reported *always*, 41.1% *often*, 4.2% *sometimes*, 2.1% *rarely*, and 1.1% *never*. As noted by one midwife:

*Engaging fathers early helps them build confidence in their parenting abilities and their ability to support their partner (female midwife of 7.5 years)*

**Table 9.3.** Midwives' perceived knowledge, skills and confidence in engaging fathers

	<b>Excellent</b>	<b>Very Good</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>
<b>Knowledge</b>	21.1%	44.2%	29.4%	4.2%	1.1%
<b>Skills</b>	22.0%	44.0%	28.5%	5.5%	0%
<b>Confidence</b>	27.6%	39.4%	25.5%	6.4%	1.1%

**Table 9.4.** The extent to which midwives ask fathers about certain topics

	<b>Always</b>	<b>Often</b>	<b>Sometimes</b>	<b>Rarely</b>	<b>Never</b>
<b>Parenting skills</b>	17.0%	51.1%	24.5%	4.3%	3.2%
<b>Emotional wellbeing</b>	17.9%	35.8%	30.5%	12.6%	3.2%
<b>Couple relationship</b>	9.5%	17.9%	37.9%	26.3%	8.4%

### **Midwives' views about fathers' perinatal mental health**

Using a sliding scale of 0-100%, midwives, on average, estimated that 21.7% of fathers experience clinical depression and 32.1% experience clinical levels of anxiety in the perinatal period. As presented in Table 5, the majority of midwives reported feeling *somewhat* confident in asking fathers about their mental health and referring fathers to mental health services. Table 6 shows that when asked to rank risk factors for fathers' perinatal mental health problems (drawn from Wee et al., 2011), midwives rated fathers' prior history of mental health problems as the top risk factor, followed by conflict in the couple relationship, and maternal mental health problems. The lowest ranked factor was long work hours.

**Table 9.5.** Midwives perceived confidence in asking fathers about their mental health and referring to mental health services

	<b>Extremely</b>	<b>Very</b>	<b>Somewhat</b>	<b>Slightly</b>	<b>Not at all</b>
<b>Mental health</b>	10.64%	29.79%	40.43%	11.70%	7.45%
<b>Referring to mental health services</b>	7.45%	30.85%	39.36%	14.89%	7.45%

**Table 9.6.** Midwives' perceived risk factors for fathers' perinatal mental health problems

<b>Risk Factor</b>	<b>Average Ranking<sup>1</sup> M (SD)</b>
Prior history of mental health problems	2.14 (1.54)
Conflict in the couple relationship	3.23 (1.66)
Maternal mental health problems	3.52 (1.86)
Traumatic birth experience	3.80 (1.77)
Poor social support	4.53 (1.71)
Low confidence in parenting skills	4.92 (1.72)
Long work hours	5.42 (1.77)

*Note.* <sup>1</sup>The factors were ranked from 1 = *most significant*, to 7 = *least significant*

### **Midwives' perceived training needs**

The majority of midwives (83%) reported that they had not received any formal training about working with fathers. Of the 17% that indicated they had received training, the following examples were provided: workshops at conferences, parenting education courses, training via Core of Life (<http://www.coreoflife.org.au/>), the Gottman Institute Bringing Baby Home course (<https://www.gottman.com/parents/new-parents-workshop/>), working with social workers and psychologists around perinatal loss, and a single lecture as part of an undergraduate midwifery degree. As seen in Table 7, all midwives agreed that it was

important to receive extra training about engaging fathers, fathers' perinatal mental health, and fathers' parenting skills. These results are reflected in the following passages:

*We need education, time and exposure to fathers (female midwife of 5 years)*

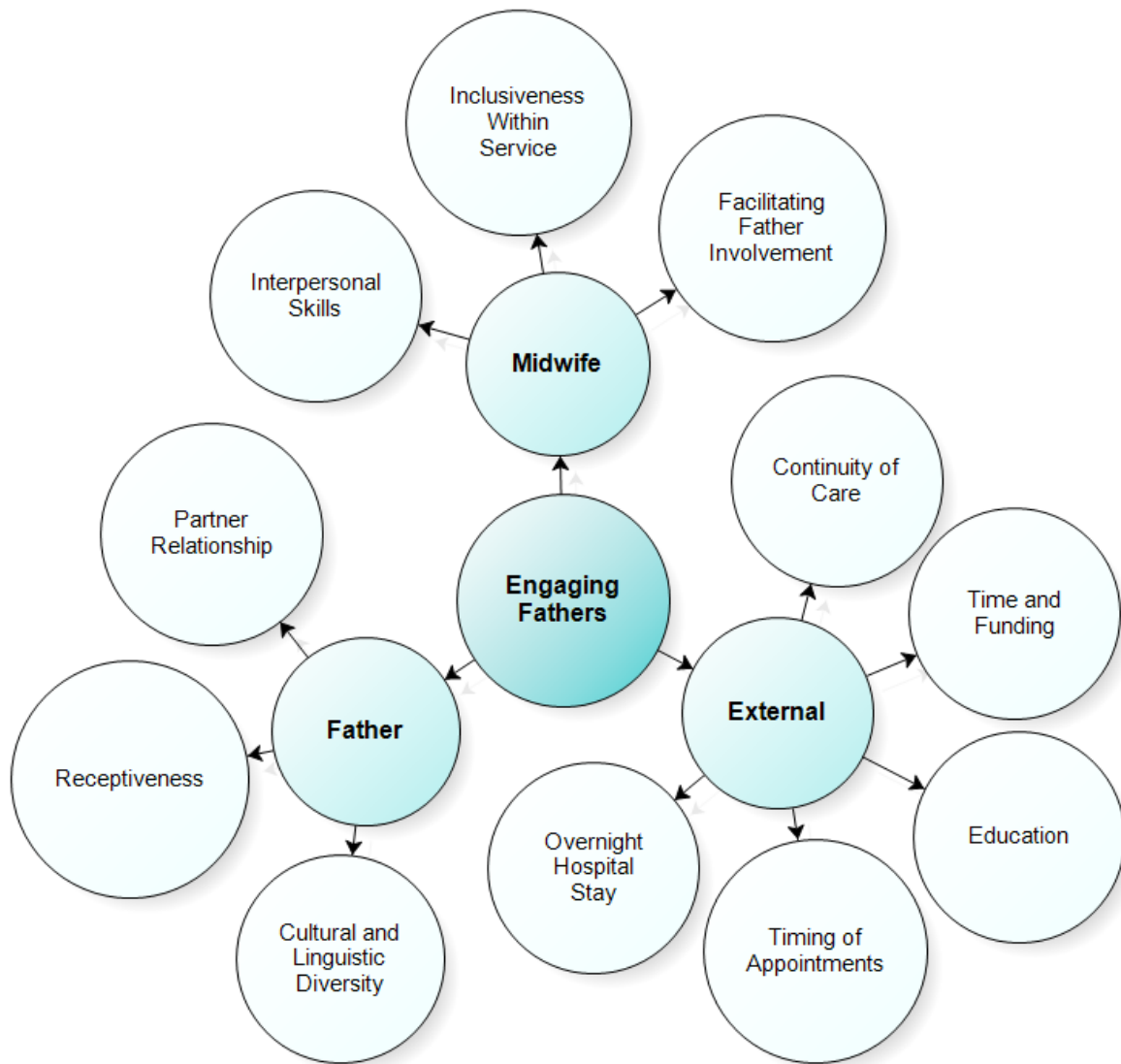
**Table 9.7.** Midwives perceived importance of receiving extra training on fathers

	<b>Extremely</b>	<b>Very</b>	<b>Somewhat</b>	<b>Slightly</b>	<b>Not at all</b>
<b>Engaging fathers</b>	35.5%	45.2%	17.2%	2.2%	0%
<b>Fathers' mental health</b>	35.1%	51.1%	9.6%	4.3%	0%
<b>Fathers' parenting skills</b>	41.5%	46.8%	8.5%	3.2%	0%

### **Strategies, facilitators and barriers to engage fathers**

Of the 13 (12%) midwives who also participated in the telephone interviews, 11 were female and one was male. The mean age of this group was 48.6 years, with ages ranging from 27 to 61 years. The sample included midwives working in both public ( $n = 9$ ; 69.2%) and private ( $n = 4$ ; 30.8%) settings for an average of 31.9 hours per week. The average number of years working as a midwife was 18.2, with the amount of experience ranging from 1 to 30 years. This group was generally representative of the overall sample of midwives who completed the online survey.

The midwives identified a range of strategies, facilitators and barriers to engaging fathers in midwifery services. Some of these were related to characteristics of midwives, factors related specifically to fathers, and several external factors relating to organisational policies. A thematic map was developed (Figure 1) to illustrate these factors. These subthemes are described below, and participant quotes are incorporated to demonstrate the core ideas.



**Figure 9.1.** Thematic map of key themes relating to engaging fathers in midwifery services

### **Theme 1: Midwife factors**

Three factors specific to the role of the midwife were identified; interpersonal skills, levels of inclusiveness within the service, and facilitating father involvement. These were perceived to be modifiable factors within the midwife’s control in relation to engaging fathers in perinatal services.

#### *1.1 Interpersonal skills*

All midwives described using basic interpersonal skills to engage fathers when they attended appointments, such as making eye contact, introducing themselves to the father as well as the mother, asking the fathers’ name and occupation, and speaking to expectant and

new parents as couples who are experiencing pregnancy and parenthood, rather than just the mother. For example:

*"I am looking after you and your family today", rather than "I am looking after her (and not you)." (MW13)*

Eliciting fathers' learning styles was also described as an interpersonal strategy to engage fathers. As this midwife stated:

*I need to find out what their learning style is because you can't just throw literature at them. In my experience, most dads don't actually go for lots of articles and books and stuff. Mothers eat it up, but fathers tend not to. There are a number of things you can do. They quite like using technology so I'm more likely to give them a slideshow or websites to look at, or actually demonstrations, like the old "baby and pelvis" model. (MW6)*

### 1.2 Inclusiveness within the service

All midwives discussed strategies they have used to promote the inclusion of fathers in their services, in order to facilitate father engagement. For example, when appropriate, midwives routinely invited and encouraged fathers to attend all appointments with their partner. If a father could not attend, several midwives described how they ensured the father received their contact details and that they understood that they were welcome to call the midwife directly if they had any questions or concerns. As one midwife stated:

*I think there is nothing worse than a father who feels like they are the third wheel. It doesn't help with their transition to parenthood if you don't give them that encouragement and support and recognition. (MW9)*

During labour and birth, midwives described how engaging fathers through inclusive communication and regular updates on progress were important. Additionally, although fathers are not the 'patient' in hospital, recording fathers' details on hospital paperwork, such as their name, age, occupation, and relationship status was identified as a key strategy to promote father inclusiveness and facilitate engagement by midwifery teams. Encouraging the

development of new parent groups was also discussed as a way of facilitating the inclusion of fathers, and promoting their engagement in services and support programs:

*Instead of having a mother's group, we call it a new parent group. (MW4)*

### 1.3 Facilitating father involvement

The majority of midwives discussed identifying the important role that fathers play in supporting their partner through pregnancy, labour, birth and breastfeeding, and infant caregiving. Communicating these ideas to fathers was identified as an effective strategy in engaging fathers. For example, giving fathers “jobs” to do during labour and birth, such as fetching a cold towel, cups of water and tea, organising music, rubbing their partner's back and holding their hand, and providing instructions to lead breathing exercises were discussed as ways to help men connect with their father role. The following quotes illustrate some midwives' attitudes behind facilitating father involvement:

*I don't say their role is important, I say that their role is essential. (MW2)*

*My philosophy is that mothers at birth are best looked after and cared for by the person that they love the most. That is almost always the father of the baby, so I tell the father that his role in the birth is to look after his wife or his partner and he is the main person who is going to do that. (MW12)*

Involving fathers in discussions about breastfeeding was identified as a critical strategy to engage fathers in supporting their partner, as well as helping the father understand that he has an important role in feeding. For example:

*With breastfeeding, we talk about when babies get over handled and they get stressed. I suggest to the dads, "I think you need to step in and be a bit of a protector here. When people come in for visits, you can say, 'Can you please wash your hands before you come into the room?', or 'We would rather not have our baby held at this particular moment, because we're just trying to establish breastfeeding and we have had a rough night.'" That kind of thing. (MW7)*

Actively including fathers when providing education and demonstrations about infant caregiving was the most common father engagement strategy discussed. For example:

*So just encouraging them to... "Do not worry. You can do it and I will help you. I will show you what to do and we will do it together. You are not expected to know this already", and that sort of stuff. So just that sort of nonjudgmental help. (MW13)*

All midwives discussed how they engage fathers by helping them connect with their role as a valued co-parent. The following passages are examples of this:

*Dads are often better at settling the babies than the mothers are because the mothers, the babies just want to feed off, or recognise mum as a person who you can have a feed but dads can calm babies better. (MW1)*

*I've tried to encourage them to look at other ways that a dad can be part of a baby's life, not specifically feeding. How are you going to plan bath time? Can that be part of dad's ritual? Baby floor time; dad can get down on the floor with the baby, singing to a baby, reading to a baby, and just encouraging that sort of involvement. They're important too. It's reframing what it looks like to be the carer. (MW8)*

## **Theme 2: External factors**

The midwives discussed several external factors impacting their capacity to engage and work with fathers. These factors were perceived to be outside of the midwives' personal control, and rather, influenced by policies and decisions made at an organisational level. The factors discussed were continuity of care, time and funding, education, timing of appointments, and overnight stays for fathers in maternity wards.

### *2.1 Continuity of care*

Following a midwife-led continuity of care model was unanimously acknowledged as a critical factor when thinking about engaging fathers in midwifery services. The underpinning philosophy of this model is that childbearing women receive their ante, intra and postnatal care from a known and trusted midwife, or a small team of midwives that have had contact with the woman throughout the perinatal period (Sandall, Soltani, Gates, Shennan, &



Devane, 2016). In the context of engaging fathers, midwives discussed how this model of care facilitates more opportunities to develop rapport with the family that they are assigned to, which in turn, enables more contact, engagement, and support for fathers. Comments from two midwives illustrate this:

*It [continuity of care] makes a big difference to the whole family. Just having the time and the one-on-one care, it's a huge difference. A woman is more likely to disclose things and even fathers might disclose things if you've got the same midwife seeing them. (MW10)*

*Many of the times I've seen a distraught father one day after the baby's born and he just had no bloody idea that it was going to be this difficult. This is where continuity of care comes along, because you're with him for several weeks or months before the baby is born, and you're still with him after the baby is born. That does help. (MW6)*

## 2.2 Time and funding

Time and funding constraints in the public health sector were perceived as major barriers to effective engagement with fathers. Several midwives described how funding constraints have led to newly imposed shorter appointments, which do not allow for sufficient time to engage with fathers. For example:

*Twenty minutes is nothing. You hardly do the basics. How do you incorporate men into that? You're just quickly ticking boxes. (MW8)*

*For the midwives to have the opportunity to really welcome fathers into the birthing process, they need to increase the amount of time that is available for being with couples. (MW12)*

Additionally, one midwife discussed feeling frustrated by the sense of disconnect between the importance of engaging fathers and the lack of support from funding bodies to facilitate this:

*The clinical service is provided to the woman; any service provided to the man is not covered by Medicare, my insurance policy or any sort of professional policy or guideline that I know of. (MW8)*

### 2.3 Education

All midwives identified a lack of father-focused training as a barrier to effective engagement of fathers in their services. Several midwives described how enhanced education about working with fathers would also enable them to provide a better service to the mother and baby. The following passages highlight key ideas of this theme:

*We don't get that much training and education regarding supporting fathers. I think, especially in adverse circumstances, fathers' mental health as a new parent gets overlooked quite a bit. I think it's just because a lot of our focus on our practice is on the women and not on the men. (MW9)*

*I think that it should become part of our education, how to integrate both parents when it comes to learning about pregnancy and delivery and childcare, so people feel a lot more confident. It would make us better midwives! (MW3)*

Additionally, the philosophy of midwifery taught in undergraduate midwifery courses was acknowledged as a pivotal moment in shaping how midwives engage with fathers. As stated by this midwife:

*In my three years at University I don't think I was taught a single thing about dads. We learn a lot about our role in 'woman centred care' but nothing about dads...what they teach you about your role as a midwife and the philosophies of midwifery really shape the kind of midwife you become in the future. Even just one lesson on what challenges dads face and how to help them would have been useful! (MW13)*

Midwives also discussed how more targeted education about fathers would enable them to enhance the antenatal classes they provide by being able to include more father-specific information. In turn, this could facilitate the engagement and support of fathers, as well as mothers. As stated by one midwife:

*The antenatal classes are really inadequate...they don't seem to address a lot of the intimate concerns that fathers do have. (MW6)*

#### *2.4 Timing of appointments*

For midwives working in the public sector, a lack of flexibility with the scheduling of appointment times was highlighted as a common barrier to engaging fathers. Despite encouraging men to attend appointments with their partner, midwives described how appointment times are usually only available during business hours, making it difficult for fathers to physically attend if they have work commitments. As highlighted in these passages:

*The most common reason why we don't meet the dads is they're working and can't make appointments. (MW9)*

*My current context...the appointment structure is so rigid. It's Monday to Friday. It's 8:30 to 4:00, that's it. There's no flexibility. (MW8)*

#### *2.5 Overnight hospital stay*

The provision for fathers to be able to stay the night in hospital with their partner and baby was identified as a significant factor associated with father engagement. Midwives described how allowing overnight hospital stays for fathers acknowledged the father role in terms of providing care and support to their partner, assisting in infant caregiving, and being a valued co-parent. In turn, this facilitates the engagement of fathers. For example:

*I think the aspect about the dad staying is probably a big thing. I know that one reason why lots of families choose private hospitals, though they probably cost a little bit, is that their partner can stay and that is their main support. (MW13)*

*Having private rooms with sleeping facilities for fathers on the postnatal ward is fabulous as both parents are sharing in the learning experiences of caring for their baby. If the father is there, then it's obviously much easier for us to engage him. (MW8)*

When maternity wards do not have provisions for fathers to stay overnight, midwives described the detrimental impact this can have for fathers. For example:

*I currently work in a service where dads can't stay after the birth. I just think that that time is so crucial and for us to be saying, "No, you have to go home," I just think it's wrong. It's just so wrong. It doesn't engage men and it makes them think that they're not important in that really crucial time. (MW9)*

### **Theme 3: Father factors**

Midwives identified factors specific to the father that can impact midwives' abilities to engage them in perinatal services. These factors were quality of the partner relationship, fathers' levels of receptiveness, and challenges with culturally and linguistically diverse fathers.

#### *3.1 Partner relationship*

Midwives readily identified that the quality of the couple relationship greatly influences the extent to which they can engage fathers. Absent fathers, hostile communications between the couple, or a dominating partner were discussed by several midwives as indicators of a poor couple relationship. In these instances, midwives described how they find it challenging to include and support fathers. When there was evidence of a supportive couple relationship, midwives noticed a significant increase in opportunities to engage fathers. As stated by one midwife:

*The dads that engage and want to engage, the relationship between the mother and the father is usually much stronger and palpably so. (MW11)*

#### *3.2 Receptiveness*

Men's level of receptiveness to perinatal services was also identified as a factor impacting midwives' abilities to engage fathers. Midwives discussed that fathers who were the most receptive were the ones who were present and showed interest. Several midwives discussed how they did their best to facilitate fathers' receptiveness to their services and support; for example:

*One of the major obstacles that I find is their receptiveness to the whole environment and situation... Sometimes you feel like you have to push just a little bit...for them to say, "Oh, okay, it's okay for me to be involved. It's not this secret woman's business."*  
(MW9)

Despite employing such strategies, midwives stated that levels of receptiveness were ultimately a factor determined by the fathers. As one midwife stated:

*You know, they don't make eye contact or they're not into talking. They almost don't want to be there...you feel a bit disheartened.* (MW1)

### 3.3 Culturally and linguistically diverse fathers

Several midwives discussed how diversity of cultural backgrounds can present challenges to engaging fathers due to differing cultural beliefs about fathers' parenting roles and particular customs that can impact family dynamics. For example, several midwives described that it is a cultural norm for fathers from particular religious or cultural backgrounds not to be involved in maternity care. As stated by one midwife:

*...some religious groups, it's the women that come and the men are less involved, but that's the way the women want it.* (MW11)

Another midwife described her experiences of providing midwifery services to remote Australian Aboriginal communities and learning about the Aboriginal custom that bans a person from talking directly to their mother-in-law. If an expectant or new mother has her own mother present, it is difficult for the father of the baby to be involved. Consequently, this impacts opportunities for midwives to engage these fathers. As stated by this midwife:

*It will appear that the father doesn't care and they're ambivalent to what's actually happening, when in fact...you may not know about the cultural sensitivities.* (MW7)

When reflecting on working with a Muslim family, one midwife noted the cultural practice of the Muslim father whispering a prayer into the right ear of his newborn, before placing the baby on the mother. As this midwife indicated:

*Midwives have got to be aware of things like this and try not to impact it when we're pushing for skin-to-skin contact immediately after birth.* (MW5)

Midwives also discussed how language barriers can contribute to the challenges of working with culturally diverse fathers. For example, if a couple has difficulty articulating their cultural norms and beliefs, it can be challenging for a midwife to appropriately engage the father.

### **Discussion**

To the best of our knowledge, this is the first study to explore a broad range of midwives' perceptions and experiences of engaging fathers in perinatal services. The midwives who participated in this study unanimously agreed that engaging fathers is part of their role. They reported feeling relatively confident to do this, particularly in the context of teaching fathers parenting skills, but all midwives highlighted a need for training to develop their knowledge and skills about engaging fathers. On average, midwives' estimates of fathers' perinatal depression and anxiety were above reported prevalence rates (Leach et al., 2016; Paulson & Bazemore, 2010), and perceptions varied about risk factors for fathers' perinatal mental health problems. Analyses of the telephone interviews led to the development of a comprehensive model of factors related to the midwife, external policies, and fathers that impact midwives' abilities to engage fathers in perinatal services. These findings represent a significant and novel contribution to the literature regarding midwives' experiences working with fathers, and contribute to the knowledge base about engaging fathers in maternity health care services.

Previous research on fathers' experiences of maternity care has consistently reported fathers' desires to be more included, in order to support their partner effectively during pregnancy, labour, and the early parenting period, and to facilitate their own transition to parenthood (Steen et al., 2012). Midwives in the present study acknowledged the important role that fathers play in a couple's transition to parenthood and identified specific skills and strategies that can facilitate the engagement of fathers. The unanimous acknowledgement from midwives that engaging fathers is a part of their role challenges the traditional depiction of midwifery as a profession geared exclusively to women and their babies (e.g., Homer et al., 2009; International Confederation of Midwives, 2014).

The methodology of the present study aligned with recommendations to explore staff attitudes and experiences as a way to improve father-inclusive practice (Berlyn et al., 2008; Fletcher et al., 2014; Maxwell et al., 2012), and highlighted the need for education and professional development training for midwives to include information about fathers. This can enable midwives to capitalise on strategies to be more father-inclusive, such as the use of interpersonal skills, promoting inclusiveness within perinatal services, and actively facilitating father involvement.

Training for midwives should also focus on fathers' perinatal mental health. Midwives in the present study overestimated the extent to which fathers experience mental health difficulties, yet they did not feel confident asking about it. These findings draw parallels with research that assessed midwives' ( $N = 815$ ) awareness and management of maternal antenatal and postpartum depressive symptoms (Jones, Creedy, & Gamble, 2012). The study reported that 30% of midwives did not consistently screen for antenatal and postpartum depression and that 36% of midwives were not able to correctly identify depressive symptoms in a case study. The investigators recommended further training for midwives to ensure their competency in the assessment and management of women experiencing perinatal depression. Findings from the present study support the notion that training for midwives should include information on fathers' perinatal mental health, particularly due to the strong relationship between maternal and paternal depression (Paulson & Bazemore, 2010; Wee et al., 2011). Additionally, information on the mental health of both parents may help midwives to manage the challenges that the quality of the partner relationship can present when trying to engage fathers.

Midwives felt challenged in their role to engage fathers due to a lack of formal training and several other systemic factors that result in men not being a significant focus in maternity services. Of particular note were the discussions about the provision of midwife-led continuity of care. A recent meta-analysis reported that, compared to medical-led models of care, midwife-led care is associated with several benefits for childbearing women and their children, such as a reduced risk of losing a baby before 24 weeks, women feeling more in

control, less medical intervention during labour, and the initiation of breastfeeding (Sandall et al., 2016). The present study provides support for midwife-led continuity of care as a model that can also benefit fathers, due to the increased opportunities for midwives to build rapport and trust with families, and consequently facilitate higher levels of father engagement.

Education institutions, policy makers and health care organisations associated with maternity care need to recognise the important role that the father plays in a couple's transition to parenthood (Fletcher et al., 2014). This recognition needs to translate to better support for midwives so that they are able to provide the best level of maternity care to families. The inclusion of father-specific information in education courses, increased time allowances for appointments to facilitate the engagement of both parents, the availability of after-hours services to cater for work commitments, and the provision of overnight hospital stays for fathers are all factors that can significantly impact midwives' abilities to engage fathers, and subsequently the quality of care offered to families.

### **Strengths and limitations**

This study had several notable strengths. First, by exploring midwives' perceptions and experiences working with fathers, this study addresses a significant gap in the literature, particularly as previous studies have documented fathers' perceptions of midwifery care and reported on the significant impact that midwives can have on the transition to fatherhood for men (Hildingsson et al., 2011; Longworth & Kingdon, 2011; Persson et al., 2012; Steen et al., 2012). Second, a combination of survey data and telephone interviews facilitated rich insights into midwives' experiences. The online survey enabled data collection from a larger sample than previous related studies. A commonly cited concern about qualitative telephone interviews is that a lack of visual cues could lead to distorted data, however there is little evidence to support this (Novick, 2008). There is also the potential for distraction of telephone interview participants by activities in their environment, although distractions have also been reported during face-to-face interview methods (Sturges & Hanrahan, 2004). In the present study, the telephone interviews enabled straightforward and unembellished descriptions of midwives' experiences, and any recommendations came from the midwives



themselves. This has particular application to practitioners and policy makers (Sandelowski, 2000). The use of *NVivo* facilitated transparent qualitative analyses and the mapping of the themes and subthemes onto a diagram. Third, the sample included male midwives, who to our knowledge have not previously been represented in any midwifery research. Finally, this study contributes to the knowledge base about including fathers in research on maternity services, an area gaining increasing interest and recognition (Fletcher et al., 2014).

Given the lack of previous research, it was necessary to design a survey for the purposes of this study. We acknowledge, however, that the survey is not a validated data collection tool. We also acknowledge the limitation of not being able to calculate a response rate to the online survey. This impacts the reliability of the survey data due to potential self-selection bias (Bethlehem, 2010). This occurs when some individuals choose to participate in a survey, while others ignore it (Wright, 2005). In this study, midwives with an interest in fathers may have been more likely to participate, resulting in biased estimates reflected in the online survey data (Bethlehem, 2010). Despite these limitations, the respondents were broadly representative in that they worked across both private and public sectors, had varying ages and years of experience, and offered a comprehensive range of perinatal services to families.

## **Conclusion**

The findings from this study have important implications for the role of the midwife during the current paradigm shift to father-inclusive care. The factors identified in this study that impact midwives' abilities to engage fathers could be used as a guide to inform maternity health care policies, as well as assist in the development of resources, university education and ongoing professional training for midwives. As this is the first known study to focus on midwives' perceptions and experiences of engaging fathers, there are many opportunities for future research to add to these findings. Research is also needed on the perceptions and experiences of different health professionals that work with fathers across the perinatal period, in order to continue to improve father-inclusive practice. Fathers need to be embraced by all levels of the health care system as a critical component of perinatal care.

## **Chapter 10: General Discussion**

The preceding chapters have established the rationale and context for this program of research, and presented the published articles of the four studies that were conducted. This chapter will summarise the key research findings, and then discuss the theoretical and practical implications of the overall results. The chapter concludes by considering the strengths and limitations of the research, followed by recommendations for future areas of inquiry.

### **Summary of research findings**

The overarching objective of this thesis by publication was to generate evidence to inform the development of policy and intervention efforts to promote the mental health of fathers in the perinatal period. To achieve this, four independent studies were conducted, designed to explore different aspects of the experience of fathers' mental health problems. In Study 1 (Chapter 6), fathers' parenting behaviours were explored as potential mechanisms linking fathers' postnatal mental health and PSE to later emotional and behavioural outcomes for their children. The results indicated that fathers' postnatal distress and low levels of PSE were associated with higher levels of fathers' parenting hostility and lower levels of parenting consistency when children were aged 4-5 years. In turn, this was associated with children's emotional and behavioural difficulties when aged 8-9 years. Additionally, fathers' levels of parenting warmth when children were aged 4-5 years were associated with fathers' postnatal PSE and children's prosocial outcomes when aged 8-9 years.

In Study 2 (Chapter 7), a systematic literature review of interventions focusing on preventing or treating fathers' perinatal mental health problems identified 11 studies, only five of which demonstrated significant intervention effects. This review highlighted the paucity of literature on this topic and identified specific design issues related to outcome measures, timing of content delivery, and the mode of intervention delivery across the studies.

Additionally, the review underscored the importance of future interventions being informed by fathers' voices about how they want to be supported during the perinatal period.

Study 3 (Chapter 8) addressed this by interviewing expectant and new fathers about support needs for their parenting and emotional wellbeing. The study described a wide range of fathers' experiences related to seeking support and several subthemes were identified within each broad area of inquiry: 1) experiences of support (e.g., marginalization with formal support services and a preference for informal support such as via friends and partner); 2) support needs (e.g., feeling better prepared, accessing support via multiple formats); 3) barriers to support (e.g., stigma associated with help-seeking, inflexibility at work); 4) facilitators of support (e.g., being actively included by perinatal health professionals, increasing awareness of available supports); and 5) timing of support (e.g., support needs specific to the perinatal stage, a tendency to seek information reactively).

Finally, Study 4 (Chapter 9) explored midwives' perceptions and experiences of engaging fathers in perinatal services via an online survey and telephone interviews. Results from the online survey indicated that the midwives considered engaging fathers to be a part of their professional role and that father-specific training is needed to develop their knowledge and skills in this area. Analysis of the interview data led to the identification of factors specific to midwives (e.g., interpersonal skills, including fathers in services, facilitating father involvement with their partner and infant), the external workplace (e.g., continuity of care model, time and funding constraints, education about fathers, timing of appointments, overnight hospital stays for father), and fathers (e.g., cultural and linguistic diversity, receptiveness to being engaged, and quality of the partner relationship) that can impact a midwife's ability to engage men in their services. As specific implications of these findings have been discussed in each chapter detailing the studies, the following sections consider several broader theoretical and practical implications.

## **Theoretical implications**

This program of research extends our theoretical understanding of issues related to fathers' perinatal mental health in three key areas; intergenerational health, the role of fathers' PSE, and models of men's help-seeking behaviour.

### ***Intergenerational health***

Over the past decade, there has been substantial interest in and efforts to understand the transmission of health and wellbeing from one generation to the next. Research exploring the many complex pathways linking paternal mental health to offspring development is an emerging focus (e.g., Beardslee et al., 2011; Giallo, Cooklin, Wade, et al., 2013; Hanington et al., 2012; Kane & Garber, 2004; Leinonen et al., 2003; Ramchandani & Psychogiou, 2009; Rutter et al., 2006; Sullivan et al., 2012; Wilson & Durbin, 2010). Study 1 contributes to our understanding of the intergenerational transmission of health and wellbeing from fathers to their children through the exploration of mechanisms and complex associations among variables thought to contribute to children's emotional and behavioural outcomes. This study highlighted the importance of the fathers' mental health in the postnatal period and early life influences on children.

A focus on fathers' parenting behaviours in Study 1 provides support for the "impaired parenting" pathway of the theoretical framework of transmission factors of fathers' psychopathology to their children proposed by Ramchandani and Psychogiou (2009). The incorporation of multiple parenting behaviours – warmth, hostility and consistency – facilitates a more nuanced understanding of "impaired parenting" as labelled by Ramchandani and Psychogiou (2009). Fathers' parenting hostility emerged as the parenting behaviour with the strongest association between fathers' postnatal distress and children's emotional-behavioural outcomes. This indicates that, compared to paternal warmth and consistency, levels of fathers' hostile parenting have particular consequences for their children, even years later. The significant pathway between fathers' postnatal PSE, parenting warmth when children are aged 4-5 years, and prosocial outcomes for children aged 8-9 years in Study 1 also represents an important theoretical contribution in two ways. First, the

findings extend the theoretical model of mothers' PSE, parenting strategies and child outcomes proposed by Ardelt and Eccles (2001) by providing evidence of these associations in the context of fathers. Second, the literature on intergenerational transmission factors has been dominated by a focus on the contagion of negative psychological distress and behaviour (for a review, see Larson & Almeida, 1999). Results from Study 1 provide some evidence about the pathways that can contribute to positive outcomes for children.

Access to five biennial waves of LSAC data in Study 1 facilitated the exploration of how fathers' postnatal mental health and PSE, and later parenting behaviours impacted their children when aged 8-9 years. To our knowledge, this is the first study to consider associations between these variables over this span of time. As such, this study adds to previous research exploring parenting behaviour in fathers of different aged children (Elgar et al., 2007; Giallo, Cooklin, Wade, et al., 2013; Low & Stocker, 2005). The results make a substantial contribution to the theoretical evidence about the enduring impact and intergenerational transmission of fathers' mental health, PSE and parenting behaviours on their children.

### ***The role of fathers' PSE***

The significant association between fathers' postnatal distress and PSE in Study 1 represents an important theoretical contribution as few studies have explored fathers' PSE in the postnatal period and within the context of mental health. Self-efficacy has been conceptualised as a set of beliefs about one's ability to perform a behaviour, task or skill, and the belief that one's behaviour will result in a particular outcome (Bandura, 1986). Parents' beliefs concerning their self-efficacy are related to their knowledge about their children's behaviour and their confidence level regarding fulfilling the parenting role (Coleman & Karraker, 2000). In his early research, Bandura (1986) hypothesized that an individual's sense of self-efficacy operates to reduce perceptions of reactions to stress and depression. Bandura (1989) also asserted that emotional affect can impact one's sense of self-efficacy; for example, depression and stress can undermine it. Based on this, it seems reasonable that the more a father feels he is able to successfully handle the demands of new

parenthood, the less his experiences of stress and depression. Alternatively, symptoms of psychological distress could undermine how a new father perceives he is doing as a parent, and thus negatively impact his PSE. As such, exploring fathers' perinatal mental health without considering levels of PSE, and vice versa, may represent a significant theoretical oversight. Consequently, the results from Study 1 highlight the importance of considering the bi-directionality of the association between fathers' mental health and PSE. The study also provides support for future theoretical models of transmission factors of fathers' mental health such as the one proposed by Ramchandani and Psychogiou (2009) to incorporate PSE, as it has important links to fathers' mental health, later parenting behaviours and child outcomes.

### ***Fathers' help-seeking***

A study by Smith, Tran, and Thompson (2008) reported that the Theory of Planned Behaviour (TPB; Ajzen, 1985) is a promising model to help understand men's psychological help-seeking. For example, men's attitudes towards seeking psychological support can impact the associations between traditional masculinity ideology and psychological help-seeking intentions in young adult men (Smith et al., 2008). In the context of fathers' help-seeking behaviours, the qualitative findings from Study 3 could inform help-seeking models such as the TPB by focusing on the unique time in men's lives when they become fathers. Several themes identified in Study 3 relate to fathers' attitudes to seeking support, including a preference to seek informal support, a reliance on their partner for information, seeking help reactively, and the experience of stigma in relation to seeking psychological support as a male. This information could extend the theoretical understanding of factors that may contribute to fathers' intentions to seek psychological support during the perinatal period.

### **Practical implications**

The evidence generated from this program of research has practical implications for applied prevention and health promotion in the context of two key areas; 1) intervention and support strategies to promote fathers' perinatal mental health, and 2) building capacity in the

service system so perinatal health professionals can engage, support and be more inclusive of fathers.

### ***Intervention and support strategies***

Findings from this research inform specific intervention targets to promote fathers' perinatal mental health, as well as guide recommendations for the design of interventions and resources for expectant and new fathers. Informed by the results from Study 1, the association between men's PSE and mental health during the first year postpartum highlights PSE as an important target for intervention. Research has reported that father involvement in child-care tasks is a strong predictor of PSE (Leerkes & Burney, 2007). Therefore, developing a new father's PSE via practical parenting support such as learning to read their baby's cues, changing nappies, bathing, and settling their baby to sleep could positively influence the father's psychological state. This idea is supported by Study 2, where all three of the massage technique interventions identified in the systematic literature review reported significant improvements in fathers' mental health outcomes. This aligns with research suggesting that a strategy expectant and new fathers may use to cope with the psychological challenges of the perinatal period is the acquisition of new skills to care for their partner and baby (Ferguson & Gates, 2015; Genesoni & Tallandini, 2009; Nyström & Öhring, 2004; Premberg, Hellström, & Berg, 2008). Perinatal resources for parents, intervention content, clinical practices and professional development resources should, therefore, incorporate information and strategies on enhancing fathers' PSE as a way to target men's perinatal mental health. Another outcome of fostering fathers' PSE is that it can be a strategy to address men's reluctance to seek support for their mental health during the perinatal period. Furthermore, given the association between fathers' perinatal mental health and PSE, perinatal health professionals could develop insight into an expectant or new father's mental state by being better attuned to their perceptions of PSE.

In Study 3, the identification of fathers' desires for support and interventions to be delivered in multiple formats, such as father's groups, antenatal classes being facilitated by a father, visual demonstrations, reputable online information, and hard copy resources,

represents other ways to support fathers in the perinatal period. Services targeting fathers' perinatal mental health and parenting need to offer delivery formats outside of traditional face-to-face programs. There is a clear need for this, evident by all of the interventions reviewed in Study 2 being delivered via face-to-face methods in clinical settings, despite these factors being key barriers to fathers' participation in programs (Bayley et al., 2009). Additionally, a reason we see limited intervention effects in several articles reviewed in Study 2 might be that the intervention content did not match the specific needs of fathers in that particular perinatal stage. For example, in Study 3, fathers reported different needs during specific trimesters of pregnancy or the early parenting period. Resources and services that align with fathers' needs at particular times are, therefore, essential.

### ***Building capacity in the service system***

As well as informing intervention and support options for fathers' perinatal mental health, this thesis has practical implications for building the knowledge and skills of health professionals and the services they work in to engage, support and be more inclusive of fathers. For example, given the constant generation of research, it is challenging for clinicians to incorporate research literature into their decision-making without the aid of systematic literature reviews (Mulrow, 1994). The synthesis of literature pertaining to interventions targeting fathers' perinatal mental health problems in Study 2, therefore, is instrumental in assisting perinatal health practitioners to support fathers. As discussed previously, the review identified that facilitating skills such as massage techniques can have a significant impact on fathers' mental health (Cheng et al., 2011; Field et al., 2008; Latifses et al., 2005). The dissemination of these findings can assist health professionals to implement evidence-based strategies to support fathers. Additionally, clinicians can be informed by the psychosocial interventions that demonstrated significant effects for fathers' mental health, such as the antenatal education program to support fathers who attend their partners' labour (Li et al., 2009), and the father-specific antenatal education session added to routine, couple-based antenatal classes at a hospital (Tohotoa et al., 2012).



A known barrier to father engagement and father-inclusive practice is health professionals' lack of skill and confidence in these areas (Alio et al., 2011; Berlyn et al., 2008; Fletcher et al., 2014). Consequently, there is increasing recognition that health services should review their procedures and staff competencies to include fathers more effectively (Raikes & Bellotti, 2007), and provide training to address any gaps. Training resources for perinatal health professionals can draw on the results from this thesis. For example, information from Study 1 about the enduring impact of fathers' perinatal mental health problems can emphasize to health professionals the importance of father-inclusive services. Information from Study 3 pertaining to fathers' support needs can provide insights for health professionals about fathers' experiences and outline several strategies to better engage fathers and improve father-inclusive practice. These include providing services outside of normal business hours, enabling flexibility within workplaces, and facilitating fathers' awareness of the supports available by advertising in suitable places. Study 4 has made a significant contribution to the literature on father-inclusive practice in the context of midwifery services. Midwives' utilization of interpersonal skills, actively including fathers during appointments, including fathers' details on hospital paperwork, and facilitating fathers' parenting involvement were identified as factors within midwives' control that can enhance their father-inclusive practice. The provision of overnight hospital stays for fathers, offering appointments outside of business hours, and engaging fathers via a continuity of care model were also identified as key father-inclusive strategies. The model of factors impacting midwives' capacities to engage fathers presented in Study 4 can be used to inform professional training resources for other groups of perinatal health professionals, such as General Practitioners, ultrasound technicians, maternal child health nurses, and obstetricians.

### **Strengths of the research**

Together with the theoretical and practical implications of the findings, there are two notable strengths of this program of research. The first was the multi-method research

approach. The combination of secondary analyses of a population-based dataset, a systematic literature review, qualitative interviews, and an online survey represents a pragmatic approach to addressing the research aims (Onwuegbuzie & Leech, 2005). A bi-focal lens on quantitative and qualitative data enabled discussion of macro and micro issues associated with fathers' perinatal wellbeing. The inclusion of qualitative data from fathers and midwives was particularly significant, given the limited amount of qualitative research focusing on these groups. Additionally, the use of mother and teacher data on children's emotional-behavioural outcomes in Study 1 and the perspectives of midwives regarding fathers in Study 4 meant that the research was not dominated by self-report data. Overall, the research approach facilitated the achievement of the primary objective, which was to generate evidence to inform the development of policy and intervention efforts to promote fathers' mental health in the perinatal period.

The focus on fathers in the perinatal period was another key strength of this thesis. In Australia, reforms in national policy over the past decade have recognised the importance of detecting and preventing perinatal mood problems (Australian Government of Health, 2013). Such initiatives acknowledge that the perinatal period is a unique time for men. Consequently, their experiences and needs during this parenting stage are distinct from others and deserve a dedicated research focus. Findings from this thesis contribute to policy and intervention efforts to promote fathers' wellbeing during this specific time. Furthermore, the inclusion of the antenatal period in the interventions reviewed in Study 2 and the qualitative interviews conducted in Study 3 contributes to the recognition of fathers' wellbeing during pregnancy, an important stage of the perinatal period.

### **Limitations of the research**

This program of research provides rich insights about impacts, interventions and supports related to fathers' perinatal mental health; however there are some limitations to note. First, the findings of the studies presented here are primarily based on data from biological or adoptive fathers who live with their children, from middle-to-high income families

from Western cultures, and those in a partner relationship. There is a need to generate evidence about the needs of fathers from socio-economically diverse backgrounds, migrant and refugee fathers, Aboriginal fathers, and teenage fathers.

Second, this thesis focused on perinatal mental health among fathers drawn from the general population, and did not focus on clinical samples of fathers. As such, the associations between fathers' mental health, parenting and children's outcomes in Study 1 might be an underestimate of the strength of associations for fathers experiencing more serious levels of psychological distress. Also of note, the interventions identified in Study 2 were all universal prevention strategies consisting of community samples, in which fathers typically experience milder symptoms of psychological distress (Wee et al., 2011). Interventions targeting the perinatal mental health of clinical samples of fathers are missing from the literature. Fathers with clinical levels of mental health problems are likely to have different needs than those described in Study 3. Finally, Study 4 focused on midwives' perceptions and experiences of working with fathers in general; responses may have differed if the context was working with fathers experiencing serious perinatal mental health issues.

### **Directions for future research**

To further develop the findings from this PhD and continue the advancement of knowledge on fathers' perinatal mental health, four broad areas of future research are recommended: 1) the inclusion of diverse father groups, 2) longitudinal research, 3) enhanced intervention design and evaluation, and 4) expanded professional training resources.

#### ***Diverse father groups***

Research on the perinatal mental health of diverse father groups, such as fathers who do not live with their children, stay at home fathers, same-sex fathers, teenage fathers, refugee fathers, and single fathers, is needed. In particular, qualitative research is required to explore the specific experiences of these father groups (Marsiglio et al., 2000), as they are significantly underrepresented in family research (Dermott, 2014). Future research should

explore how varied socio-cultural factors impact the perinatal mental health of these diverse father groups. For example, whether the pregnancy was planned, concerns about balancing work and family life, social support, mental health history, exposure to parental role models, and processes by which partners support or undermine each other's parenting efficacy during the transition to parenthood. Future studies also need to include clinical samples of fathers in order to better understand how to support men experiencing more serious perinatal mental health problems.

To facilitate this, broader issues regarding sampling and access to father participants need to be considered. It is likely that many fathers who adhere strongly to masculine norms are reluctant to voluntarily refer to services for mental health or research on this topic (Addis & Mahalik, 2003; Levant, 2011; Mansfield et al., 2003). Gaining the insights of such reluctant men should be a priority for research and future designs should consider ways of circumventing sampling problems by investigating if novel means of data collection, including use of smart phones, or online focus groups, can improve the representativeness of these fathers (Fletcher et al., 2016; Fletcher et al., 2008).

### ***Longitudinal research***

Longitudinal investigation into additional mechanisms that help to explain the link between fathers' mental health and child outcomes is critical in continuing to inform prevention and intervention efforts for family wellbeing. Research also needs to explore how changes in variables over time relate to each other, such as the relationship between fathers' distress and PSE, and how this impacts the father, the couple relationship, and children long-term. This may create a stronger empirical basis for the role of PSE in the lives of parents and their children and provide further information for the development of more effective parenting interventions. Given that the level of experience one has in a particular situation is thought to influence the level of efficacy (Bandura, 1986), future longitudinal research on PSE may also benefit from including measures of paternal involvement and participation in childrearing.

Assessing paternal factors in the antenatal period is another key consideration for longitudinal research. This stage of the perinatal period has received less attention in the literature in the context of fathers' psychological wellbeing, despite being a critical transition stage for men (Boyce et al., 2007). Research exploring antenatal factors such as men's mental health history, experiences with antenatal services, fatherhood expectations, and gender role stress could be useful for intervention purposes; both to identify and target fathers who are at a higher risk of experiencing perinatal mood problems and to identify strategies to enhance their mental health prior to the birth of their infant.

Finally, existing longitudinal literature is dominated by self-report data, which may be influenced by selection bias as well as bias associated with mental health symptoms. This could be addressed by incorporating other methods such as clinical interviews to assess fathers' mental health, parent-child interaction observations to assess parenting behaviour, and maternal or teacher reports of child outcomes.

### ***Intervention design and evaluation***

Further research is warranted to develop and evaluate the effectiveness of RCT interventions for fathers' perinatal mental health, with a specific focus on intervention content to determine specific preventative mechanisms. The incorporation of standardized outcome measures across intervention programs is vital to facilitate the collective evaluation of intervention approaches (Gilbody, House, & Sheldon, 2001). Consideration of appropriate timing of content delivery is also needed in future intervention designs as well as the exploration of different delivery formats. Such design elements need to be informed by fathers' voices and matched to their psychological needs (Habib, 2012). The Internet and emerging smartphone technologies offer potential in this area. In Australia, recent years have seen an increase in web and phone-based applications that target fathers; for example, SMS4Dads, a text-message based support service for expectant and new fathers (Fletcher et al., 2016), and websites What Were We Thinking (<http://www.whatwerewethinking.org.au/>) and the Raising Children Network (<http://raisingchildren.net.au/fathers/fathers.html>), which include father specific resources. These platforms support the possibility of developing

screening and support processes that do not require fathers to attend a face-to-face support services. However, these are novel interventions and rigorous evaluation is still required.

Notably, only one of the interventions reviewed in Study 2 demonstrated significant treatment effects on levels of paternal depression (Field et al., 2008). Evidently, there is much work to be done to support fathers' perinatal mental health problems such as depression, as well as the recognition of comorbidity among several mental health conditions. The lack of significant intervention effects on fathers' perinatal mental health in the couple-based interventions reviewed in Study 2 is also notable. A large body of literature has demonstrated that co-parenting – “how parents coordinate their parenting, support or undermine each other, and manage conflict regarding child rearing” – (Feinberg & Kan, 2008, p.253) is a central aspect of family life. As the paradigm shift towards father-inclusive research and practice gains momentum, co-parenting interventions are ideally placed to address the current inequalities in mother-centric health and parenting education services (Fletcher et al., 2015) and could be an effective strategy to engage fathers about their mental health. Given the strong association between mothers' and fathers' perinatal mental health (Goodman, 2004; Paulson & Bazemore, 2010), future co-parenting interventions need to consider how to better support the perinatal mental health of both parents.

### ***Professional training resources***

The development and evaluation of father-specific resources and training for perinatal health professionals, such as midwives, is another area for future research. Key evaluation outcomes should be health professionals' increased skills and perceived confidence to engage fathers, and the extent to which fathers feel that their needs are being met by perinatal services. Additionally, a well-documented problem for primary healthcare practitioners is differentiating between normal distress associated with the adjustment to parenthood and more serious mental health problems during this time (Austin, 2003). This calls for training to include information about perinatal mental health, and the facilitation of closer links between mental health and primary care providers in the perinatal period.

## **Conclusion**

This thesis has made a significant contribution to perinatal mental health research and practice via the development and execution of four distinct studies focusing on fathers. This is timely work that has much to contribute to policy and intervention efforts aiming to support fathers' perinatal mental health. Promoting the engagement and inclusion of fathers throughout pregnancy and the postnatal period reinforces gender-equity policies and community beliefs about the value of both parents' involvement in infant caregiving. By studying men as fathers and exploring issues related to their perinatal mental health, we have also acknowledged one of the most dramatic social changes over the last few decades. The challenge remains for researchers and clinicians to work together in developing more effective means of preventing and reducing men's experiences of psychological distress in the perinatal period. The health and wellbeing of men, their partners, and their children, depends on this.

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**Appendix A.** Peer-reviewed articles included as chapters of the thesis

**Rominov, H.,** Giallo, R., & Whelan, T. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour and children's emotional-behavioural functioning: A longitudinal study. *Journal of Family Psychology, 30*, 907-917. doi: 10.1037/fam0000216

**Rominov, H.,** Pilkington, P.D., Giallo, R., & Whelan, T. (2016). A systematic review of interventions targeting paternal mental health in the perinatal period. *Infant Mental Health Journal, 37*(3), 289-301. doi: 10.1002/imhj.21560

**Rominov, H.,** Pilkington, P.D., Giallo, R., & Whelan, T. (2017). "Getting help for yourself is a way of helping your baby": Fathers' perceived support needs for mental health and parenting in the perinatal period. *Psychology of Men & Masculinity (in press)*.

**Rominov, H.,** Giallo, R., Pilkington, P.D., & Whelan, T. (2017). Midwives' perceptions and experiences of engaging fathers in the perinatal period. *Women and Birth (in press)*. doi: 10.1016/j.wombi.2016.12.002

## Study 1

# Fathers' Postnatal Distress, Parenting Self-Efficacy, Later Parenting Behavior, and Children's Emotional-Behavioral Functioning: A Longitudinal Study

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Fathers' postnatal distress has been associated with subsequent emotional and behavioral problems for children; however, the mechanisms by which this occurs have received less attention. One potential pathway could be via the negative effects that father mental health problems and parenting self-efficacy (PSE) in the postnatal period have on later parenting behaviors. Using a nationally representative cohort of Australian father-child dyads ( $N = 3,741$ ), the long-term relationships between fathers' psychological distress and PSE in the postnatal period, parenting behavior when children were aged 4–5 years, and emotional-behavioral outcomes for children aged 8–9 years were explored. Path analysis indicated that high distress and low PSE in the postnatal period was associated with higher levels of hostile parenting and lower parenting consistency when children were aged 4–5 years; in turn, these were associated with poorer child outcomes at 8–9 years. These results remained significant after controlling for socioeconomic position, couple relationship quality, mothers' and fathers' mental health, and fathers' concurrent parenting behavior. The pathways among PSE, parenting hostility, parenting consistency, and children's outcomes at age 8–9 years differed for fathers of boys compared with fathers of girls. Results highlight the importance of father-inclusive assessments of postnatal mental health. Support programs targeting new fathers' perceptions of parenting competence may be particularly important for fathers experiencing postnatal distress. For fathers, building a stronger sense of parenting competence in the postnatal period is important for later parenting behavior, which relates to children's emotional and behavioral outcomes during middle childhood.

**Keywords:** child outcomes, father, postnatal, parenting behavior, self-efficacy

During the first 12 months postpartum, some fathers experience significant mental health issues. Approximately 10% of fathers suffer from depression (Giallo et al., 2012; Paulson & Bazemore, 2010), with estimates even higher among men whose partners experience perinatal depression, ranging from 24% to 50% (Goodman, 2004). Furthermore, 10–17% of fathers experience an anx-

iety disorder during this time (Matthey, Barnett, Howie, & Kavanagh, 2003). Given these rates, there has been an increased focus on understanding the potentially enduring effects of fathers' postnatal mental health on child outcomes. A meta-analysis found that paternal depression was significantly associated with internalizing and externalizing psychopathology in children (Kane & Garber, 2004). Subsequently, several longitudinal studies report significant long-term effects of fathers' postnatal distress on children's emotional and behavioral functioning up to age 7 years (Giallo, D'Esposito, et al., 2013; Ramchandani, Stein, Evans, & O'Connor, 2005) and a higher prevalence of psychiatric diagnoses in children (Ramchandani et al., 2008).

These studies highlight the importance of including fathers in research on child development and the family environment. Further understanding is needed about the mechanisms that help to explain the association between fathers' postnatal mental health and later child outcomes because this may inform prevention and intervention efforts targeting fathers' mental health. Guided by a developmental model exploring the transmission of psychopathology in families (Goodman & Gotlib, 1999), one potential pathway could be via the negative effects that father mental health problems and low parenting self-efficacy (PSE) in the postnatal period have on later parenting behaviors.

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Data from the Longitudinal Study of Australian Children were used in this study. The study was conducted in partnership between the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA); the Australian Institute of Family Studies (AIFS); and the Australian Bureau of Statistics (ABS). The findings reported in this article are those of the authors and should not be attributed to FaHCSIA, AIFS, or the ABS.

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## A SYSTEMATIC REVIEW OF INTERVENTIONS TARGETING PATERNAL MENTAL HEALTH IN THE PERINATAL PERIOD

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**ABSTRACT:** Interventions targeting parents' mental health in the perinatal period are critical due to potential consequences of perinatal mental illness for the parent, the infant, and their family. To date, most programs have targeted mothers. This systematic review explores the current status and evidence for intervention programs aiming to prevent or treat paternal mental illness in the perinatal period. Electronic databases were systematically searched to identify peer-reviewed studies that described an intervention targeting fathers' mental health in the perinatal period. Mental health outcomes included depression, anxiety, and stress as well as more general measures of psychological functioning. Eleven studies were identified. Three of five psychosocial interventions and three massage-technique interventions reported significant effects. None of the couple-based interventions reported significant effects. A number of methodological limitations were identified, including inadequate reporting of study designs, and issues with the timing of interventions. The variability in outcomes measures across the studies made it difficult to evaluate the overall effectiveness of the interventions. Father-focused interventions aimed at preventing perinatal mood problems will be improved if future studies utilize more rigorous research strategies.

**Keywords:** mental health, father, intervention, paternal, perinatal

**RESUMEN:** Las intervenciones que se enfocan en la salud mental de los padres en el período perinatal son críticas debido a las consecuencias potenciales de la enfermedad mental perinatal para el progenitor, el infante y su familia. Hasta ahora, la mayoría de los programas se han enfocado en las madres. Esta revisión sistemática explora la actual condición y evidencia para programas de intervención con miras a prevenir o tratar la enfermedad mental paterna en el período perinatal. Se investigaron los bancos de información electrónica sistemáticamente para identificar estudios avalados por colegas que describen una intervención enfocada en la salud mental de los papás en el período perinatal. Entre los resultados de salud mental se incluyeron la depresión, la ansiedad, el estrés así como también medidas más generales del funcionamiento psicológico. Se identificaron once estudios. Tres de cinco intervenciones sicosociales y tres intervenciones de técnica de masaje reportaron efectos significativos. Ninguna de las intervenciones con base en la pareja reportó efectos significativos. Se identificó un número de limitaciones metodológicas, incluyendo el reporte inadecuado de diseños de estudio y asuntos relacionados con el momento de las intervenciones. La variabilidad en medidas de resultados a través de los estudios dificultó la evaluación de la efectividad general de las intervenciones. Las intervenciones enfocadas en el papá con miras a prevenir problemas perinatales de estado de ánimo mejorarán si los estudios futuros utilizan estrategias de investigación más rigurosas.

**Palabras claves:** salud mental, padre, intervención, paterno, perinatal

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Paula D. Pilkington was funded by an Australian Postgraduate Award. The funding source had no role in the study design; in the collection, analysis, and interpretation of data; in the writing of the report; or in the decision to submit the paper for publication. No other funding or sources of support facilitated work described in this article or the writing of the article itself. We report no conflict of interest.

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## “Getting Help for Yourself is a Way of Helping Your Baby:” Fathers’ Experiences of Support for Mental Health and Parenting in the Perinatal Period

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The need for services targeting fathers in the perinatal period is increasingly apparent. To maximize engagement, such interventions need to be father focused, but men’s experiences and needs around support have not been adequately examined. Therefore, the aims of this qualitative study were to explore men’s experiences of seeking support for their mental health and parenting in the perinatal period, and identify their specific support needs during this time. Australian fathers ( $N = 20$ ) who were expecting or parenting an infant less than 2 years of age participated in individual semistructured face-to-face or telephone interviews. Thematic content analysis was used to analyze the data. Five broad themes were explored: experiences of support, support needs, barriers to support, facilitators to support, and timing of support. Several subthemes were identified within each category, illustrating a diverse range of issues that fathers experience across the perinatal period. The findings have implications for our understanding of fathers’ help-seeking behaviors, their perinatal support needs and for the development of resources, services, and interventions aiming to engage fathers in maternity health services.

**Keywords:** father, perinatal, support, barriers, facilitators

The extent to which men invest in their identity as fathers varies according to several factors, such as personal family history, socioeconomic status, education, relationship status, and cultural background (Bronte-Tinkew, Carrano, & Guzman, 2006; Carrington, 2013). For men who are biological fathers and reside in the same home as their children, opportunities to invest in the identity and role of a father are considerable. In industrialized, Western cultures, a shift in societal beliefs about gender roles and parenting has contributed to the increasing involvement of these fathers during all stages of the perinatal period (i.e., pregnancy

through to 12 months postpartum), including antenatal appointments, the labor and birth process, and early parenting responsibilities (Dette-Hagenmeyer, Erzinger, & Reichle, 2014; Genesoni & Tallandini, 2009). There is growing recognition of the unique contribution that fathers make to the family system, including being an integral support to their partner (Pilkington, Milne, Cairns, Lewis, & Whelan, 2015), and having the potential to significantly impact their children’s development, independent of mothers (Giallo, Cooklin, Wade, D’Esposito, & Nicholson, 2013; Lamb, 2010; Rominov, Giallo, & Whelan, 2016; Wilson & Durbin, 2010). As such, it is essential that men are supported in their role as a father. However, fathers’ experiences of support and their support needs in the perinatal period are not well understood. Using data from qualitative interviews with expectant and new fathers, the current study sought to address this gap by exploring Australian men’s experiences of seeking support and their support needs during their transition to fatherhood.

The key stages of the perinatal period represent distinctive transitional phases for men’s psychological wellbeing. For example, several longitudinal studies have described the prenatal stage to be the most distressing of the perinatal stages for men, due to the intense psychosocial reorganization that occurs during this time (Buist, Morse, & Durkin, 2003; Condon, Boyce, & Corkindale, 2004; Ramchandani et al., 2008). The labor and birth phase represents a time of intense and mixed emotions for new fathers, which can range from joy, excitement, pride, and love, to anxiety, fear, horror, and helplessness (Greenhalgh, Slade, & Spiby, 2000; Hallgren, Kihlgren, Forslin, & Norberg, 1999). For some fathers,

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We thank David Hamilton for assisting with the conceptualization of this study. We also express our gratitude to the fathers who participated in the project. Holly Rominov was funded by an Australian Postgraduate Award. The funding source had no role in the study design; in the collection, analysis and interpretation of data; in the writing of the report; or in the decision to submit the article for publication. No other funding or sources of support facilitated work described in this article or the writing of the article itself.

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## Original Research - Qualitative

## Midwives' perceptions and experiences of engaging fathers in perinatal services

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## ABSTRACT

**Background:** The active engagement of fathers in maternity care is associated with long-term benefits for the father, their partner, and their child. Midwives are ideally placed to engage fathers, but few studies have explored midwives' experiences of working with men. Therefore, the aim of this study was to describe midwives' perceptions and experiences of engaging fathers in perinatal services.

**Method:** A multi-method approach was utilised. Registered midwives ( $N=106$ ) providing perinatal services to families in Australia participated in an online survey. Of these, 13 also participated in semi-structured telephone interviews. Descriptive analyses summarised the online survey data. The interview data were coded using semantic thematic analysis.

**Results:** Survey results indicated that midwives unanimously agreed that engaging fathers is part of their role and acknowledged the importance of receiving education to develop knowledge and skills about fathers. Analysis of the telephone interviews led to the identification of a range of strategies, facilitators and barriers to engaging fathers in midwifery services. Some of these were related to characteristics of midwives, factors related specifically to fathers, and several external factors relating to organisational policies.

**Conclusions:** Findings from this study could inform maternity health care policies, as well the development of resources, education and ongoing professional training for midwives to promote father-inclusive practice.

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## Statement of significance

## Problem or issue

The World Health Organisation recently declared that engaging fathers is a priority for all maternal health services around the world. Surveying staff attitudes and experiences has been recommended as a strategy to improve father-inclusive practice. Few studies have explored midwives' experiences of working with fathers.

## What is already known

The active engagement of fathers in maternity care is associated with long-term psychological and social benefits for the father, their partner, and their child.

## What this paper adds

Midwives recognised the importance of engaging fathers, but acknowledged significant knowledge gaps. Several strategies, barriers and facilitators to engaging men in perinatal services offered by midwives were identified.

## 1. Introduction

Over recent decades, expectant and new fathers have become increasingly involved in antenatal and maternal health care services. Today, many fathers see themselves as much more than just passive support persons for their partners during the perinatal period, the time encompassing pregnancy, labour, birth, and the first 12 months postpartum.<sup>1</sup> Despite fathers' physical presence and desire for increased involvement, many high-resource health-care systems tend to generate feelings of exclusion, fear, and uncertainty for fathers,<sup>1–3</sup> which can increase men's vulnerability to experience mental health problems. This is of concern, as a

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### **Appendix C.** Statement of contribution of others

This thesis by publication comprises the original work of the author. In all published research studies, the author was the Principal Investigator, contributed 60% or more, and planned and prepared the work for publication.

**Rominov, H.,** Giallo, R., & Whelan, T. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour and children's emotional-behavioural functioning: A longitudinal study. *Journal of Family Psychology, 30*, 907-917. doi: 10.1037/fam0000216

This publication is included as Chapter 6 of the thesis. Holly Rominov conceptualized the study, analysed the data, and drafted the manuscript. Dr Rebecca Giallo and Dr Thomas Whelan contributed to conceptualizing the study and critically revised the manuscript. Dr Rebecca Giallo also assisted with the data analysis. All authors approved the final manuscript.

**Rominov, H.,** Pilkington, P.D., Giallo, R., & Whelan, T. (2016). A systematic review of interventions targeting paternal mental health in the perinatal period. *Infant Mental Health Journal, 37*(3), 289-301. doi: 10.1002/imhj.21560

This publication is included as Chapter 7 of the thesis. Holly Rominov planned and executed the systematic review, completed the data extraction and analysis, and drafted the manuscript. Dr Rebecca Giallo and Dr Thomas Whelan contributed to conceptualizing the study and critically revised the manuscript. Dr Pamela Pilkington assisted with data extraction and contributed to the manuscript. All authors approved the final manuscript.



**Rominov, H., Pilkington, P.D., Giallo, R., & Whelan, T. (2017).** *“Getting help for yourself is a way of helping your baby”*: Fathers’ perceived support needs for mental health and parenting in the perinatal period. *Psychology of Men & Masculinity (in press)*.

This publication is included as Chapter 8 of the thesis. Holly Rominov conceptualized the study, collected and analysed the data, and drafted the manuscript. Dr Pamela Pilkington contributed to the study design, assisted with data analysis, and critically revised the manuscript. Dr Rebecca Giallo and Dr Thomas Whelan contributed to conceptualizing the study and critically revised the manuscript. Dr David Hamilton provided guidance during the development of the study. All authors approved the final manuscript.

**Rominov, H., Giallo, R., Pilkington, P.D., & Whelan, T. (2017).** Midwives’ perceptions and experiences of engaging fathers in the perinatal period. *Women and Birth (in press)*.  
doi: 10.1016/j.wombi.2016.12.002

This publication is included as Chapter 9 of the thesis. Holly Rominov conceptualized the study, collected and analysed the data, and drafted the manuscript. Dr Rebecca Giallo contributed to conceptualizing the study and the online questionnaire, and critically revised the manuscript. Dr Pamela Pilkington assisted with data analysis, and critically revised the manuscript. Dr Thomas Whelan contributed to conceptualizing the study and critically revised the manuscript. All authors approved the final manuscript.

## Appendix D. LSAC data user licence signatures

### Execution

Executed as a DEED on Date: 28/4/14

Signed, sealed and delivered for and on behalf of **THE COMMONWEALTH OF AUSTRALIA** as represented by the **Department of Social Services** by

Name of authorised officer (print)

Signature of authorised officer

Branch Manager, Longitudinal Studies, Evaluation and Policy Capability Branch

Name of HILDA authorised officer (print)

Signature of HILDA authorised officer

*Helen Rogers*



Name of LSAC authorised officer (print)

Signature of LSAC authorised officer

Name of LSIC authorised officer (print)

Signature of LSIC authorised officer

In the presence of

*Joanne Harrison*

Name of witness (print)



Signature of witness

## Appendix E. Registration of systematic review with PROSPERO

### PROSPERO International prospective register of systematic reviews

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#### Current evidence for interventions targeting father's mental health and parenting behaviour in the perinatal period

*Holly Rominov, Thomas Whelan, Rebecca Giallo*

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##### Citation

Holly Rominov, Thomas Whelan, Rebecca Giallo. Current evidence for interventions targeting father's mental health and parenting behaviour in the perinatal period. PROSPERO 2015:CRD42015015035 Available from [http://www.crd.york.ac.uk/PROSPERO\\_REBRANDING/display\\_record.asp?ID=CRD42015015035](http://www.crd.york.ac.uk/PROSPERO_REBRANDING/display_record.asp?ID=CRD42015015035)

##### Review question(s)

What is the current evidence of mental health and parenting interventions for fathers in the perinatal period?

##### Searches

Electronic databases PsycINFO, MEDLINE and CINAHL and Web of Science will be searched using search terms related to: 1) fathers; 2) perinatal period and 3) interventions.

The search terms will be required to appear in the abstract. Where possible, searches will be limited to peer-reviewed articles and articles written in English. No publication date limits will be applied. Additional sources will be identified by hand searching reference lists of studies identified as relevant from the initial search, as well as by screening papers citing these relevant studies.

##### Types of study to be included

Include if:

- a) retrospective;
- b) longitudinal;
- c) cross-sectional;
- d) case-control;
- e) peer reviewed journal article.

Exclude if:

- a) does not report father data (e.g. review paper, meta-analysis, or discussion paper);
- b) reports a single case study c) participants were not exposed to an intervention;
- d) article not in English

##### Condition or domain being studied

Fathers' mental health in the perinatal period is defined as any psychological distress (e.g. depression, anxiety, stress) occurring either during pregnancy or within the first 12 months postpartum. Fathers' parent behaviour is defined as any caregiving behaviours.

##### Participants/ population

Include if:

- a) Participants are expectant fathers, or fathers of infants aged 12 months or younger at the time the independent
-

variable was assessed;

b) All participants are at least 18 years of age.

Exclude if:

a) Study did not report mental health or parent behaviour data

### **Intervention(s), exposure(s)**

Include if:

a) At least one IV is a measure of mental health and/or parent behaviour;

b) was assessed during pregnancy or up to 12 months postpartum.

Exclude if:

a) no quantitative data available

### **Comparator(s)/ control**

Not applicable.

### **Context**

Studies on expectant fathers/fathers of infants aged up to 12 months that examine the efficacy of interventions targeting mental health and/or parent behaviour

### **Outcome(s)**

Primary outcomes

Mental health and/or parent behaviour outcomes for fathers

Secondary outcomes

None

### **Data extraction, (selection and coding)**

Associations between interventions and mental health and/or parent behaviour variables will be extracted from the studies that meet full inclusion criteria by HR, using a standardised extraction sheet and codebook. The following data will be extracted: basic descriptive information about the sample, the study design, length of follow-up periods, details of the predictor and outcome variables, and the effect size and direction (if applicable). A set of rules has been developed to standardise the process. A research assistant will independently extract the data to confirm accurate extraction.

Discrepancies will be discussed between HR and the research assistant. Any differences that remain will be resolved through consultation with research team (TW and RG).

### **Risk of bias (quality) assessment**

Not applicable

### **Strategy for data synthesis**

A narrative synthesis is planned for this review

### **Analysis of subgroups or subsets**

None planned

### **Dissemination plans**

The review will be submitted for publication in a peer reviewed journal

**Contact details for further information**

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Dr Thomas Whelan, Australian Catholic University

Dr Rebecca Giallo, Murdoch Children's Research Institute

**Details of any existing review of the same topic by the same authors**

None

**Anticipated or actual start date**

02 February 2015

**Anticipated completion date**

31 July 2015

**Funding sources/sponsors**

No funding provided.

**Conflicts of interest**

None known

**Language**

English

**Country**

Australia

**Subject index terms status**

Subject indexing assigned by CRD

**Subject index terms**

Fathers; Humans; Mental Health; Parent-Child Relations; Parenting; Pregnancy

**Stage of review**

Ongoing

**Date of registration in PROSPERO**

17 February 2015

**Date of publication of this revision**

17 February 2015

**DOI**

10.15124/CRD42015015035

<b>Stage of review at time of this submission</b>	<b>Started</b>	<b>Completed</b>
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

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**PROSPERO**

**International prospective register of systematic reviews**

The information in this record has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.

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**Appendix F.** References of studies included in the systematic literature view presented in Chapter 7

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## Appendix G. Human Research Ethics Committee Approval Certificate – Study 3



### Human Research Ethics Committee Committee Approval Form

Principal Investigator/Supervisor: Dr Thomas Whelan  
Co-Investigators: Dr Lisa Milne, Dr Rebecca Giallo, Dr David Hamilton  
Student Researcher: : Holly Rominov (HDR Student), Pamela Pilkington(HDR Student)

Ethics approval has been granted for the following project:  
Interventions for perinatal distress and parenting: The needs and support preferences of mothers and fathers  
for the period: 30/06/2016  
Human Research Ethics Committee (HREC) Register Number: 2015-131E

#### Special Condition/s of Approval

*Prior to commencement of your research*, the following permissions are required to be submitted to the ACU HREC:  
N/A

The data collection of your project has received ethical clearance but the decision and authority to commence may be dependent on factors beyond the remit of the ethics review process and approval is subject to ratification at the next available Committee meeting. The Chief Investigator is responsible for ensuring that outstanding permission letters are obtained, interview/survey questions, if relevant, and a copy forwarded to ACU HREC before any data collection can occur. Failure to provide outstanding documents to the ACU HREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research. Further, this approval is only valid as long as approved procedures are followed.

Clinical Trials: You are required to register it in a publicly accessible trials registry prior to enrolment of the first participant (e.g. Australian New Zealand Clinical Trials Registry <http://www.anzctr.org.au/>) as a condition of ethics approval.

It is the Principal Investigators / Supervisors responsibility to ensure that:

1. All serious and unexpected adverse events should be reported to the HREC with 72 hours.
2. Any changes to the protocol must be reviewed by the HREC by submitting a Modification/Change to Protocol Form prior to the research commencing or continuing. <http://research.acu.edu.au/researcher-support/integrity-and-ethics/>
3. Progress reports are to be submitted on an annual basis. <http://research.acu.edu.au/researcher-support/integrity-and-ethics/>
4. All research participants are to be provided with a Participant Information Letter and consent form, unless otherwise agreed by the Committee.
5. Protocols can be extended for a maximum of five (5) years after which a new application must be submitted. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

Researchers must immediately report to HREC any matter that might affect the ethical acceptability of the protocol eg: changes to protocols or unforeseen circumstances or adverse effects on participants.

A handwritten signature in black ink that reads 'K. Paskey'.

Signed: .....

..... Date: .... 19/10/2016.....

## Appendix H. Human Research Ethics Committee Approval Certificate – Study 4



### Human Research Ethics Committee Committee Approval Form

**Principal Investigator/Supervisor:** Dr Thomas Whelan  
**Co-Investigators:** Dr Rebecca Giallo, Dr David Hamilton  
**Student Researcher:** : Holly Rominov (HDR Student)

**Ethics approval has been granted for the following project:**  
Midwives' perceptions and experiences of engaging fathers in the perinatal period  
  
**for the period:** 30/06/2017  
**Human Research Ethics Committee (HREC) Register Number:** 2016-73E

#### Special Condition/s of Approval

*Prior to commencement of your research*, the following permissions are required to be submitted to the ACU HREC:

The data collection of your project has received ethical clearance but the decision and authority to commence may be dependent on factors beyond the remit of the ethics review process and approval is subject to ratification at the next available Committee meeting. The Chief Investigator is responsible for ensuring that outstanding permission letters are obtained, interview/survey questions, if relevant, and a copy forwarded to ACU HREC before any data collection can occur. Failure to provide outstanding documents to the ACU HREC before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research. Further, this approval is only valid as long as approved procedures are followed.

Clinical Trials: You are required to register it in a publicly accessible trials registry prior to enrolment of the first participant (e.g. Australian New Zealand Clinical Trials Registry <http://www.anzctr.org.au/>) as a condition of ethics approval.

It is the Principal Investigators / Supervisors responsibility to ensure that:

1. All serious and unexpected adverse events should be reported to the HREC with 72 hours.
2. Any changes to the protocol must be reviewed by the HREC by submitting a Modification/Change to Protocol Form prior to the research commencing or continuing. <http://research.acu.edu.au/researcher-support/integrity-and-ethics/>
3. Progress reports are to be submitted on an annual basis. <http://research.acu.edu.au/researcher-support/integrity-and-ethics/>
4. All research participants are to be provided with a Participant Information Letter and consent form, unless otherwise agreed by the Committee.
5. Protocols can be extended for a maximum of five (5) years after which a new application must be submitted. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

Researchers must immediately report to HREC any matter that might affect the ethical acceptability of the protocol eg: changes to protocols or unforeseen circumstances or adverse effects on participants.

A handwritten signature in black ink that reads 'K. Pashley'.

Signed: .....

..... Date: .... 2/05/2016.....

(Research Services Officer, Australian Catholic University, Tel: 02 9739 2646)

**Appendix I. Study 4 questionnaire pro forma**

**1. Please rate the following...**

To what extent do you see it as part of your role as a midwife to engage fathers (i.e. to actively include fathers in your services)?	<input type="checkbox"/> Large	<input type="checkbox"/> Moderate	<input type="checkbox"/> Small	<input type="checkbox"/> Minor	<input type="checkbox"/> No part
How do you rate your knowledge about how to engage fathers?	<input type="checkbox"/> Excellent	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
How do you rate your skills in engaging fathers?	<input type="checkbox"/> Excellent	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor
How do you rate your confidence in engaging fathers?	<input type="checkbox"/> Excellent	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor

**2. To what extent do you ask fathers about the following?**

	<b>Always</b>	<b>Often</b>	<b>Sometimes</b>	<b>Rarely</b>	<b>Never</b>
Their couple relationship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their emotional wellbeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Their parenting skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. To what extent do you ensure fathers are taught new parenting skills (e.g. bathing, changing a nappy, swaddling, settling)?**

- Always
- Often
- Sometimes
- Rarely
- Never

**4. What percentage (%) of fathers do you believe experience the following mental health issues in the perinatal period? (slide scale out of 100)**

Clinical depression \_\_\_\_\_

Clinical anxiety \_\_\_\_\_

**5. How confident do you feel about the following?**

	<b>Extremely</b>	<b>Very</b>	<b>Somewhat</b>	<b>Slightly</b>	<b>Not at all</b>
Asking fathers about their mental health?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Referring fathers to services for their mental health?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**6. Rank the following risk factors for fathers' perinatal mental health problems, from the most significant (1) to the least significant (7):**

- \_\_\_\_\_ Maternal mental health problems
- \_\_\_\_\_ Long work hours
- \_\_\_\_\_ Prior history of mental health problems
- \_\_\_\_\_ Poor social network
- \_\_\_\_\_ Traumatic birth experience
- \_\_\_\_\_ Low confidence in parenting skills
- \_\_\_\_\_ Poor support/conflict in the couple relationship

**7. Have you received any formal midwifery training about engaging fathers?**

- Yes (please briefly describe) \_\_\_\_\_
- No

**8. How important do you think it is for midwives to receive extra training about the following?**

	<b>Extremely</b>	<b>Very</b>	<b>Somewhat</b>	<b>Slightly</b>	<b>Not at all</b>
Engaging fathers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fathers' mental health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fathers' parenting skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. Would you like to add anything else about your perceptions and experiences of engaging fathers?**



**MEDIA RELEASE**

**22 September 2015**

### **Fathers' mental health crucial to better parenting**

Fathers' psychological distress in the postnatal period is associated with lower perceptions of parenting competence, higher levels of hostile parenting and poorer outcomes for children, a new ACU study has found.

The finding is part of a thesis study called '*Mechanisms impacting the relationship between father's mental health and child outcomes*' which was undertaken by PhD student, Holly Rominov from Australian Catholic University. The study explores the long-term relationships between fathers' postnatal mental health and later parenting behaviour.

Ms Rominov's quantitative research used data from the *Growing Up in Australia: Longitudinal Study of Australian Children* – a national, ongoing Government research initiative which follows the development of children and families from across Australia.

She analysed 2,045 father-child pairs, using data when children were 0-12 months old, as well as when they were eight to nine years old. There was a near-even split of male and female children (51 per cent male and 49 per cent female).

Ms Rominov said there is clear evidence of the negative effects of both short-term and long-term paternal psychological distress on children.

"The short-term effects include fathers being less responsive to infant cues, less involved in child caregiving tasks, and increased incidences of parenting hostility. This can result in impaired infant development and compromised family relationships. Longer term impacts include harmful effects on children's emotional, social, and cognitive development and wellbeing, and continued strain on couples' relationships," she said.

Ms Rominov said supporting fathers' postnatal mental health is critical for the promotion of healthy fathers, children, and families.

"Positive parent behaviours have been shown to promote children's development across several domains including brain development, emotional regulation, language skills, academic performance, and general social-psychological wellbeing. Conversely, less positive parent behaviours can result in significant negative consequences for children's psychological, social and physical adjustment," she said.

Ms Rominov said her research had implications for the policymakers and support services focused on supporting parents, children and families.

"In Australia and other countries, early identification of maternal perinatal distress and the provision of early intervention and support has received a lot of attention. There is a need to move toward

perinatal mental health assessment that is inclusive of the whole family, ensuring that appropriate mental health support is provided to all members of the family, including fathers,” she said.

Ms Rominov recently came first in ACU’s Three Minute Thesis (3MT) competition and was also awarded the People’s Choice Award, as voted by members of the audience.

3MT is a research communications competition, held at universities around the world. Students have just three minutes to present a compelling oration on their thesis and its significance in language appropriate to a non-specialist audience.

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The screenshot shows the top portion of a web page. At the top right, there is a navigation menu with links for Home, About, Editorial Advisors, Contact, and Subscribe. On the left, the logo for 'CHILD & FAMILY BLOG' is displayed, with the tagline 'Learning from research to improve children's well-being' below it. To the right of the logo are icons for search, a heart, and social media (Twitter and Facebook). Below the navigation is a dark green bar with three white text boxes: 'COGNITIVE DEVELOPMENT & EDUCATION', 'MOTHERS, FATHERS, FAMILY DYNAMICS', and 'SOCIAL EMOTIONAL LEARNING'. The main content area features a large image of a man's face in profile, with a dark grey text box overlaid in the center containing the title: 'POSTNATAL DEPRESSION IN FATHERS LINKED TO PARENTING PROBLEMS YEARS LATER'. Below the image is a green bar with the text 'Share this article and subscribe for updates' and three social media icons (Facebook, Twitter, and a heart icon).

Fathers who are distressed and have low confidence in their parenting ability in the postnatal period are more likely to exhibit poorer parenting when their child is 4-5 years old. Researchers found these fathers were more likely to exhibit more hostility and lower parenting consistency. The study also found that children parented in this diminished way at 4-5 years were more likely to demonstrate emotional, social and behavioural difficulties at the age of 8-9 years.

The researchers, led by Holly Rominov at the Australian Catholic University, looked at data from 3,741 fathers in Australia. The reports on children's behaviour were provided by mothers, fathers and teachers.

Another connection that the researchers found in the data was between fathers' higher self-confidence in the postnatal period, warmer parenting when the child was aged 4-5 years, and a more sociable child at age 8-9 years – the converse of the relationship between fathers' low self-confidence and later problems for children.

It is estimated that about 10% of fathers suffer from depression after their baby is born, and research has established that children of depressed fathers are more likely to have emotional and behavioural problems in later life.

The researchers present their findings as further evidence to support more father-inclusive approaches to perinatal mental health – for example, information for new fathers about the emotional changes that can easily take place after a baby is born. Practical parenting support for fathers experiencing postnatal distress may build fathers' confidence that could reduce later childhood problems.

Rominov H, Giallo R & Whelan TA, Fathers' postnatal distress, parenting self-efficacy, later parenting behaviour, and children's emotional-behavioural functioning: a longitudinal study, *Journal of Family Psychology*, 2016 (in press at time of posting article, June 2016)

Posted on: Thursday 21 July 2016

## IMPACT OF INTERVENTION ON FATHER'S MENTAL HEALTH

### FRB COMMENT

*Interventions with new fathers are beginning to be reported. As would be expected they vary markedly in what they offer to fathers. Pulling together the results of disparate intervention programs within a systematic review can provide pointers for further developing father-targeted programs and services. The review by Rominov et al suggests that, at this stage, teaching baby massage is one effective way to support new fathers.*

### A SYSTEMATIC REVIEW OF INTERVENTIONS TARGETING PATERNAL MENTAL HEALTH IN THE PERINATAL PERIOD

#### ABSTRACT

*Interventions targeting parents' mental health in the perinatal period are critical due to potential consequences of perinatal mental illness for the parent, the infant, and their family. To date, most programs have targeted mothers. This systematic review explores the current status and evidence for intervention programs aiming to prevent or treat paternal mental illness in the perinatal period. Electronic databases were systematically searched to identify peer-reviewed studies that described an intervention targeting fathers' mental health in the perinatal period. Mental health outcomes included depression, anxiety, and stress as well as more general measures of psychological functioning. Eleven studies were identified. Three of five psychosocial interventions and three massage-technique interventions reported significant effects. None of the couple-based interventions reported significant effects. A number of methodological limitations were identified, including inadequate reporting of study designs, and issues with the timing of interventions. The variability in outcomes measures across the studies made it difficult to evaluate the overall effectiveness of the interventions. Father-focused interventions aimed at preventing perinatal mood problems will be improved if future studies utilize more rigorous research strategies.*

ROMINOV, H., PILKINGTON, P. D., GIALLO, R., & WHELAN, T. A. (2016). A SYSTEMATIC REVIEW OF INTERVENTIONS TARGETING PATERNAL MENTAL HEALTH IN THE PERINATAL PERIOD. *INFANT MENTAL HEALTH JOURNAL*, 37(3), 289-301.



## Fathers' mental health crucial to better parenting

★★★★★ (2 votes, average: 4.00 out of 5)



Fathers' psychological distress in the postnatal period is associated with lower perceptions of parenting competence, higher levels of hostile parenting and poorer outcomes for children, a new ACU study has found.

The finding is part of a thesis study called 'Mechanisms impacting the relationship between father's mental health and child outcomes' which was undertaken by PhD student, Holly Rominov from Australian Catholic University. The study explores the long-term relationships between fathers' postnatal mental health and later parenting behaviour.

Ms Rominov's quantitative research used data from the Growing Up in Australia: Longitudinal Study of Australian Children – a national, ongoing Government research initiative which follows the development of children and families from across Australia.

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## Distressed fathers with low confidence in their parenting postnatally are more likely to exhibit parenting hostility when their child is 4-5 years old.

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In a study analysing data from 3,741 fathers in Australia, we found that fathers who are distressed and have low confidence in their parenting ability in the postnatal period are more likely to exhibit more parenting hostility and less consistency when their child is 4-5 years old.

Our study also found that children parented in this diminished way at 4-5 years were more likely to demonstrate emotional, social and behavioural difficulties at the age of 8-9 years.

The reports on children's behaviour were provided by mothers, fathers and teachers.

Another connection we found in the data was between fathers' higher self-confidence in the postnatal period, warmer parenting when the child was aged 4-5 years, and a more sociable child at age 8-9 years – the converse of the relationship between fathers' low self-confidence and later problems for children.

It is estimated that about 10% of fathers suffer from depression between the first trimester of pregnancy and 12 months after their baby is born, and research has established that children of depressed fathers are more likely to have emotional and behavioural problems in later life.

Our advice is to include fathers in assessments of perinatal mental health and encourage fathers to participate in programs designed to promote their emotional wellbeing and parenting competence. Family members should look out carefully for signs of perinatal distress not just in mothers, but fathers as well – doing something about it early will help the child in the future.

## Midwives should receive education in engaging with fathers (Australia)

 In [Organizing family inclusion](#) Tags: [informing families](#), [attending facilities](#) 8th February 2017



A survey of Australian midwives has found a strong belief that midwife education should include the issue of engagement with fathers. Currently, in Australia, it does not.

[Holly Rominov](#) and colleagues asked 106 midwives to complete an on-line questionnaire and then they interviewed 13 of them.

78% of the midwives saw engaging with fathers as a large part of their role.

*I feel very strongly that the more a father is engaged with, the better the parent-child bond will be with his baby, and hopefully this will help him feel more confident to team parent with his wife/partner. (Female midwife of 10 years)*

All the midwives said that training was necessary but 83% had never received any.

*We need education, time and exposure to fathers. (Female midwife of 5 years)*

When asked what topics they always or often raised with fathers, 68% said parenting skills, 54% said emotional wellbeing and 27% said the couple relationship.

The study authors recommend that engagement with fathers be incorporated into midwife training and professional development, in particular: interpersonal skills with fathers/couples, promoting inclusiveness in maternity care and facilitating father involvement in support of the mother and baby.



## Teaching fathers how to massage their partners and babies is good for fathers' mental health (international)

 In [Mental health](#) 20th February 2017



A review of perinatal support programmes for fathers found that the most consistent approach to addressing poor mental health is learning to massage either the pregnant woman or the baby, compared to antenatal education that focuses on parenting knowledge and well-being, and couple-based approaches focusing on relationships and coparenting.

The review was carried out by [Holly Rominov](#) and colleagues at the Australian Catholic University in Australia.

Out of the 11 studies that qualified for the review, three related to massage.

In two of these programmes, expectant fathers were taught by a qualified masseuse to massage their pregnant partners. In the first, the fathers were instructed to follow a 20-minute massage routine twice a week at home, for 5 weeks. In addition, both expectant parents were taught a 20-minute relaxation technique. In the second programme, the twice-weekly 20-minute massages were continued for 16 weeks. Both trials found reduced anxiety levels in fathers and in the second, reduced symptoms of depression, all antenatally.

The third massage programme focused on baby massage, with four weeks of training for fathers of infants aged 5 to 14 months. This resulted in significantly lower levels of stress.

Why might massage training work? One possibility, advanced by the authors of the review, is that teaching fathers a tangible skill may help them to feel they have a valuable role. And massage creates a feeling of connection.

Another possibility is that this is linked to the hormonal changes that take place in men when they engage in gentle physical contact with the mother or baby: oxytocin increases and testosterone decreases and this leads in turn to neurobiological changes. Perhaps this process also leads to a greater sense of calm and wellbeing.

Rominov H, Pilkington PD, Giallo R & Whelan TA (2016), [A systematic review of interventions targeting paternal mental health in the perinatal period](#), *Infant Mental Health Journal* 37.3

Photo: [shira.gal](#). Creative Commons.