

**Early Parenting Support Services  
for Women Who Gave Birth in a Private Hospital:  
An Explanatory Sequential Mixed-Methods Analysis**

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## **Certificate of Authorship**

I, Deborah J Sims, declare that this thesis is submitted in fulfilment of the requirements for the award of Degree of Philosophy in Nursing, in the Faculty of Health, at the University of Technology Sydney.

This thesis is wholly my own work, unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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## Table of Contents

Abstract.....	8
Chapter 1 – Perinatal Mental Disorder, Early Parenting Support Services and The Australian Health System.....	10
1.1 Introduction .....	10
1.2 Perinatal Mental Disorder.....	10
1.3 Maternal Self-efficacy and Social Support .....	11
1.4 Maternal Self-efficacy and Perinatal Mental Health .....	12
1.5 Social Support and Perinatal Mental Health .....	13
1.6 Care Across the Perinatal Period.....	15
1.7 The Cost of Perinatal Mental Disorders .....	17
1.8 Perinatal Support Services for Women Who Gave Birth in a Private Hospital .....	18
1.9 Thesis design.....	20
Chapter 2 – Integrative Review of Early Parenting Support Services Outcome Measures .....	23
2.1 Introduction .....	23
2.2 Method .....	23
2.2.1 Search Strategies .....	24
2.2.2 Results of Search .....	30
2.2.3. Analysis of Outcomes of Early Parenting Support Services .....	30
2.3. Results of Analysis.....	30
2.3.1 Domains of Outcome Measurements .....	35
2.3.2 Mental Health Outcomes .....	37
2.3.3 Parenting Self-Efficacy .....	43

2.3.4 Stress .....	45
2.4 Discussion.....	45
2.5 Conclusion .....	47
Chapter 3 – Methodology.....	48
3.1 Introduction .....	48
3.2 Research Aim and Objectives.....	48
3.3 Theoretical Frameworks.....	48
3.3.1 Social Support Underpinned by Social Exchange Theory .....	49
3.3.2 Self-Efficacy Theory.....	50
3.4 Study Design.....	51
3.4.1 Phase 1 – Comparison of Postnatal Mental Disorder for Public and Private Hospitals.....	55
3.4.2 Phase 2 – Experience of Social Support Services.....	56
3.5 Data Collection.....	57
3.5.1 Participants.....	57
3.5.2 Recruitment .....	57
3.5.3 Recruitment Results .....	61
3.5.4 Non-Participation .....	61
3.5.5 Study Setting .....	61
3.5.6 Interviews and Focus Groups .....	62
3.6 Data Analysis.....	66
3.6.1 Step 1 – Thematic Analysis .....	66
3.6.2 Step 2 – Template Analysis .....	68
3.6.3 Summary of Analysis .....	72

3.7 Research Trustworthiness .....	72
3.7.1 Confirmability .....	73
3.7.2 Credibility .....	74
3.7.3 Dependability .....	74
3.7.4 Transferability .....	75
3.7.5 Personal Reflection.....	76
3.8 Ethical Considerations .....	76
3.8.1 Data Management and Storage.....	77
3.8.2 Safety and Security.....	77
Chapter 4 Results of Phase 1 – Risk of Perinatal Mental Disorder for Women who Gave Birth in a Private Hospital.....	79
Chapter 5 Findings of Phase 2 – Perinatal Assessment of Risk of Mental Illness; Experience of First-time Mothers and Clinician, Australian Private Hospitals .	105
Chapter 6 Findings of Phase 2 – Maternal Self-Efficacy and Infant Feeding Support Services.....	134
6.1. Support to Set and Achieve Own Infant Feeding Goals.....	134
6.2 Unrealistic Expectations of Breastfeeding.....	135
6.3 Unsupported in Infant Feeding.....	141
6.4 Summary.....	151
Chapter 7 Findings Phase 2 – Parenting Reassurance and Maternal Self-Doubt .....	153
7.1 Peer-Support Groups .....	153
7.2 Online Peer Support .....	159
7.3 Online Parenting Information .....	161
7.4 Summary.....	169
Chapter 8 – Discussion and Conclusion .....	170

8.1 Early Parenting Support Services Outcome Measures .....	171
8.2 Results Phase 1 – Risk of Perinatal Mental Disorder for Women who.....	172
8.3 Perinatal Assessment of Risk of Mental Disorder .....	173
8.4 Findings Phase 2 – Maternal Self-Efficacy and Infant Feeding Support Services .....	174
8.4.1 Infant Feeding – Unprepared and Unsupported to Set Own Goals ....	174
8.4.2 Parenting Reassurance and Maternal Self-Doubt – Peer Support Groups.....	178
8.5 Conclusion to the Chapter.....	182
8.6 Conclusion to the Thesis.....	183
8.7 Recommendations on Early Parenting Support Services .....	185
8.8 Limitations and Future Research .....	188
Bibliography .....	191
Appendices .....	204

## Abstract

The transition to motherhood increases the risk of developing or exacerbating a mental disorder, which can have negative outcomes for the woman, her baby and family. Both early parenting support and maternal self-efficacy can ameliorate the risk of developing a perinatal mental disorder. The main aim of this study was to examine early parenting support services for women giving birth in a private hospital and how these support services influence perinatal mental disorder. There were two research objectives: 1) to determine the risk of postnatal mental disorder for women who gave birth in a private hospital compared to women who gave birth in a public hospital in NSW; and 2) to explain the difference through the exploration and interpretation of maternal self-efficacy in stakeholder experience of social support services for women who gave birth in a private hospital. An explanatory, sequential, mixed methods study was undertaken in two phases. The mixed methods design combined the large sample size and generalisability of the quantitative method and the depth and detail of qualitative methods to explore the complexity of perinatal social support services.

In Phase 1, binary regression analysis of state-wide population data determined that the women who gave birth in private hospitals (n = 47 609) were more likely to be admitted to hospital in the postnatal year with a primary diagnosis of a mental disorder (rate=2.54 %, 95%CI=2.40-2.68 %), compared with the women who gave birth in public hospitals (n = 148 864) (rate=1.68 %, 95%CI=1.61-1.75 %). In Phase 2, exploration and interpretation of stakeholder experience of support services for new mothers provided possible explanation of this result. Thematic and template analysis were underpinned by social exchange theory and self-efficacy theory. Interview data from clinicians (n = 23), primigravid women (n = 8) and administrators (n = 3) at two private hospitals provided three support service themes: *Perinatal Assessment of Risk of Mental Disorder*; *Maternal Self-Efficacy* and *Infant Feeding Support Services and Parenting Reassurance and Maternal Self-Doubt*. The first theme explained that

comprehensive psychosocial assessment was not provided as part of routine perinatal care, which may increase the risk of developing a mental disorder. The second theme determined that infant feeding support services did not facilitate women to achieve their own feeding goals, which may undermine maternal self-efficacy. The third theme highlighted a disjuncture between women's belief of the advantages and clinician's belief in the disadvantages of parenting reassurance through online support. This disjoint may also undermine maternal self-efficacy. As maternal self-efficacy may not have been supported the risk of a mental disorder may have been increased.

This study demonstrated that women who gave birth in a private hospital were at increased risk of a mental disorder and that lack of provision for psychosocial assessment as part of routine care and support services that impede or do not support maternal self-efficacy may contribute to this risk.

# **Chapter 1 – Perinatal Mental Disorder, Early Parenting Support Services and The Australian Health System**

## **1.1 Introduction**

The many changes in the transition to parenthood increase the risk of a woman developing a mental disorder, which can affect the baby's development and reduce positive outcomes for her and her family. Both early parenting support and maternal self-efficacy have been demonstrated to ameliorate perinatal mental disorder. Although 45% of Australian women give birth in a private hospital they are less likely to be assessed for mental disorder and less likely to access early parenting support services.

As no previous study has investigated early parenting support services for women who gave birth in a private hospital this study aimed to examine these services and how these support services influence perinatal mental disorder. There were two research objectives: 1) to determine the risk of postnatal mental disorder for women who gave birth in a private hospital compared to women who gave birth in a public hospital in NSW; and 2) to explain the difference through the exploration and interpretation of maternal self-efficacy in stakeholder experience of social support services for women who gave birth in a private hospital.

This chapter provides background on perinatal mental disorder, maternal self-efficacy and social support, maternal self-efficacy and perinatal mental health, social support and perinatal mental health, perinatal support services for women who gave birth in a private hospital and thesis design.

## **1.2 Perinatal Mental Disorder**

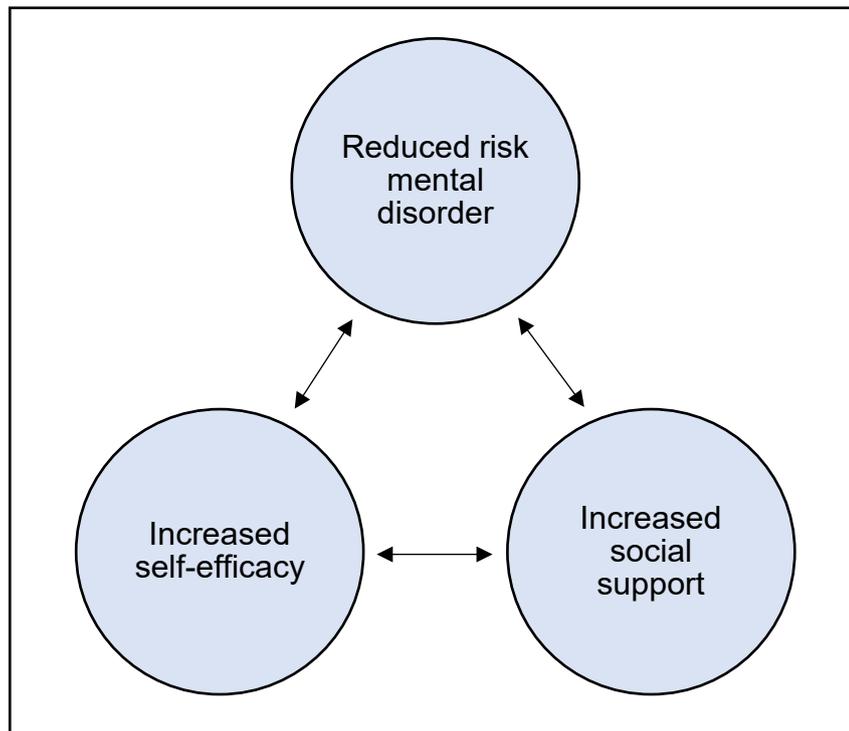
The term mental disorder is the term, used by studies that analyse linked hospital admission data (Fenglian Xu et al. 2016) Mental disorder is defined by

the American Psychiatric Association, as to describe health conditions involving significant changes in thinking, emotion and/or behaviour, distress and/or problems functioning in social, work or family activities (American Psychiatric Association 2018). Mental disorder includes anxiety and depression. The perinatal period, of pregnancy and the first year after birth, is a time of increased risk for women to develop a mental disorder, such as depression and anxiety (Epifanio et al. 2015; Maxson et al. 2016; Rasmussen et al. 2017; Woolhouse et al. 2014). During the perinatal period one in five women will experience mental disorder (Epifanio et al. 2015; Milgrom & Gemmill 2014). The consequence of perinatal mental disorder may include serious, long-term sequelae for the women and her family (Giallo et al. 2015; Jarde et al. 2016; Kerstis 2016; Murray et al. 2010). During pregnancy the complications of mental disorder are reported to be higher than physical complications such as gestational diabetes and hypertension (Centre for Epidemiology and Evidence 2016). Of those women affected by mental disorder during the perinatal period one quarter will suffer from either a chronic or recurrent mental disorder (Patten, Kennedy & Lam 2009).

### **1.3 Maternal Self-efficacy and Social Support**

During the perinatal period the risk of developing a mental disorder may be ameliorated by maternal self-efficacy and by social support (Bandura 1993). Based on Bandura's theory of human agency the *Triadic Reciprocal Causation* in Figure 1 demonstrates the relationship between risk of mental disorder, self-efficacy and social support. Bandura (1997) demonstrated that our environment, such as social support, may bring internal changes, such as self-efficacy. The following is proposed that when self-efficacy is facilitated, the risk of mental illness is decreased and when social support is lacking, self-efficacy may be reduced and the risk of mental illness is increased. Additionally, behaviour may bring changes to our surroundings, so that mental illness may reduce self-efficacy, which may directly or indirectly reduce social support.

Figure 1: Triadic Reciprocal Causation



#### 1.4 Maternal Self-efficacy and Perinatal Mental Health

Maternal self-efficacy is defined as woman's belief in her own capability to organise and execute tasks related to the care of her child (Leahy-Warren, McCarthy & Corcoran 2011b). An inverse relationship can be established between social support and postnatal depression and between postnatal depression and maternal self-efficacy (Leahy-Warren, McCarthy & Corcoran 2011a; Leahy-Warren, McCarthy & Corcoran 2011b; Zhang & Jin 2016). One of the main predictors of maternal self-efficacy in first-time mothers was demonstrated to be social support (Shorey, Yap & Hong-Gu 2015).

For a new mother maternal self-efficacy affects both her psychological well-being and the development of her child (Sanders & Woolley 2005). The well-being of the mother may be adversely affected when maternal self-efficacy is not well supported (Leahy-Warren, McCarthy & Corcoran 2011b; Ngai, Chan & Ip 2010). By correlation, the risk of a new mother developing a mental disorder

is reduced when self-efficacy is increased (Shorey et al. 2015). Importantly, social support has been identified as a positive factor in increasing levels of maternal self-efficacy, and the resultant improved agency reduced the risk of perinatal mental disorder (Leahy-Warren, McCarthy & Corcoran 2011b).

## **1.5 Social Support and Perinatal Mental Health**

Having access to and receiving social support may reduce the risk of developing a mental disorder during the perinatal period and thus improve parenting outcomes (World Health Organization 2018). The conceptual framework of social support is underpinned by Homans' Social Exchange Theory (Homans 1974). Social support is defined as; actual or perceived exchange of resources that improves coping, esteem, belonging and competence (Gottlieb 1985a). Healthy relationship formation and development is a fundamental human function and the theory of social exchange is one of the most prominent frameworks used to examine this dynamic (Patt 2013). For new mothers, social support improves quality of life, supports successful pregnancy, mediates stress and in the course of its delivery, can act as a predictor of depression (Emmanuel, St John & Sun 2012; Razurel et al. 2013). Following birth, social support contributes to maternal confidence in the care of a newborn infant, promoting assistance seeking behaviour and improving emotional wellbeing (Razurel et al. 2013; Shorey et al. 2014). The effect of this provision of social support in the prenatal period has seen the reduction of strong negative emotions and concerns, improvements in the quality of coping with stress and an increase in the chances of a successful pregnancy completion (Skurzak et al. 2015).

Hence, social support services provided by competent professionals in a timely manner, has been proven potentially beneficial to the mother. By promoting healthy parenting practices, parenting skills are developed or enhanced and assistance is given in resolving family challenges as a consequence (Hooge, Benzies & Mannion 2014; Xuereb, Abela & Spiteri 2012). Perception of social

support, including perception of support services, has been demonstrated as an important factor during the perinatal period and is directly related to increased parental self-efficacy (Razurel et al. 2013).

For a new mother social support services may include the provision of information, assessment of emotional wellbeing and assistance with parenting through the various stages of the child's development (Small et al. 2014b). This support may be provided in a number of formats: prenatal classes, psychosocial assessment, referral to emotional wellbeing, mental health, substance abuse, financial or domestic violence services, parenting adjustment services, dysregulation support and psychoeducational programs provided by early parenting support services<sup>1</sup> and well-baby checks that include parenting information such as early childhood health centre visits or home visits.

Services vary by program format, perinatal context, provider type, outcome measure and funding. During the perinatal period, services may be provided by a variety of health care professionals: midwives, lactation and sleep consultants, child and family health nurses, practice and pharmacy nurses, paediatricians and GPs (Psaila, Schmied, et al. 2014; Psaila et al. 2015). However, despite the variety of services available as well as the number of service providers, traditional discontinuities in service provision during the perinatal period may risk fragmentation of care that can impede access to services (Psaila, Schmied, et al. 2014).

For a new mother a perceived increase in social support is related to increased parental self-efficacy, improved psychological health and decreased symptoms of depression (Razurel et al. 2013). The risk of developing a perinatal mental disorder is increased when self-efficacy is low and decreased when self-efficacy

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<sup>1</sup> Such as Tresillian Family Care Centres and Karitane: two NSW based early parenting services that offer a range of services – residential, day services, home visiting, parent help-lines, parent education and therapeutic group programs.

is high (Shorey et al. 2015). The concept of maternal self-efficacy is where a mother has a belief in their capability to organise and execute tasks related to the care of their child (Leahy-Warren, McCarthy & Corcoran 2011b). The changes experienced when becoming a mother potentially increases stress, which increases the risk of the development of perinatal mental disorder and decreases the likelihood of maternal confidence (Leahy-Warren, McCarthy & Corcoran 2011b). However, women who gave birth in a private hospital were found to be less likely to access social support services (Reilly et al. 2013; Reilly et al. 2015). Although for new mothers the relationships between social support, self-efficacy and the risk of developing a mental disorder are well established, these factors have not been studied for women who gave birth in a private hospital. As Social Exchange Theory and Self-Efficacy Theory form the basis of the theoretical framework more in-depth information will be provided in Chapter 3.

## **1.6 Care Across the Perinatal Period**

In Australia, prenatal services are provided by the public healthcare system for 55% of women, 30% of women receive care from a privately paid obstetrician, 15% from a General Practitioner (Reilly et al. 2013) and less than 1% from a privately practising midwife (Australian Government 2016).

Maternity services in Australia can be categorised as public, private, home birth or other (Reilly et al. 2013). Public maternity care is provided through a public hospital or birthing centre. Women who access public maternity services are provided with prenatal care, labour and birth support and/or intervention and immediate postnatal care from federally or state funded midwives and obstetricians. For a woman who chooses to give birth in a private hospital, or under the care of a private obstetrician in a public hospital, care is directed by an obstetrician during the prenatal, labour, birth and the immediate postnatal period. For those who choose to give birth at home, a privately practising

midwife will provide care throughout pregnancy, birth and the postnatal period (Australian College of Midwives 2011).

Australian women who have given birth are entitled to access a state government funded universal service, provided from the time of birth until the child is five years old, by child and family health nurses, or their state named equivalent (Corr, Rowe & Fisher 2015; Schmied et al. 2011). These health support services provide monitoring of infant health and development, as well as opportunities for the women to seek personal and infant care advice (Corr, Rowe & Fisher 2015; Schmied et al. 2011). General practitioners may also play a role in the provision of postpartum health care (Corr, Rowe & Fisher 2015) although postnatal services are available to all Australian women, service provision varies between state and local government jurisdictions (Reilly et al. 2013; Schmied et al. 2011). Maternity care in the private sector traditionally does not extend beyond birth and the immediate postpartum period (Reilly et al. 2015). Appendix 1 provides a summary of Australian Social Support Services for New Mothers.

In the past decades, the focus of perinatal services has changed to incorporate psychosocial and mental health through early detection and management of risk of mental disorder, including anxiety and depression (Briggs 2013; Reilly et al. 2013; Reilly et al. 2015). These services may include the assessment of psychosocial factors, integration of information received from the woman and collaboration with her in the formulation of a management or care plan (Austin & Highet 2017; Department of Human Services 2005). However, in Australia, women who give birth in the private sector are less likely to access this early parenting support (Reilly et al. 2015).

There were 309,142 births registered in Australia in 2017 (Australian Government 2019). All Australians are entitled to health care through the Federal Government funded system of Medicare (Australian Government

Department of Health 2017). In addition to the Medicare entitlement, 44.2% of the population held hospital treatment insurance policies (Australian Prudential Regulation Authority 2019). There were more than 11 million admissions to hospital in 2017-2018, and of these 4.5 million, or 40% were in a private hospital (Australian Institute of Health and Welfare 2019a). This figure includes the 25.9% of births that take place there (Australian Institute of Health and Welfare 2019b).

## **1.7 The Cost of Perinatal Mental Disorders**

The perinatal period, from conception to the baby's first birthday, presents a critical time for a woman, her baby and her family (World Health Organization 2018). During this period, mental health is critical in order to optimise parenting, ensure the development of the baby and enable new parents to manage the physical, emotional and social changes that parenting brings (Austin, Highet & Committee 2011; Halligan et al. 2007; Murray et al. 2010). During the perinatal period, 20% of women are affected by a mental disorder (World Health Organization 2018).

Mental disorders in the perinatal period have the potential to reduce positive outcomes for women, their babies, their families and society (Austin & Highet 2017). Maternal outcomes of perinatal mental disorder include a woman's inability to care for herself, increasing the risk of both her physical disorder, as well as her risk of suicide (World Health Organization 2018). In Australia, five of the 23 maternal deaths were due to suicide, this was the leading cause of maternal death in 2016 (Australian Institute of Health and Welfare 2018).

Foundations of human health and development are set before pregnancy and infancy (Irwin, Siddiqi & Hertzman 2007). Early development has an influence on health, wellbeing, criminality, social interaction and economic participation throughout the life course (Irwin, Siddiqi & Hertzman 2007; Maggi et al. 2010;

Morrison et al. 2014). Therefore, the quality of both infant-parent interactions and of the relationship affects infant development and health trajectory (Irwin, Siddiqi & Hertzman 2007). Infant outcomes of perinatal mental disorder include: disruption to breastfeeding, interruption of the attachment relationship and reduced baby care (World Health Organization 2018). Mental disorder increases the risk of parenting inadequacies, which can range from lack of confidence, knowledge or skills to neglect, abuse and exploitation (Trillingsgaard, Damkjaer Maimburg & Simonsen 2015). For women with untreated depression during the antenatal period, there is a significant increase in the risk of preterm birth or having a low birth weight infant (Jarde et al. 2016).

Perinatal mental disorder incurs a financial cost. In 2012 perinatal mental disorder cost Australia approximately 80 million dollars (Deloitte Access Economics 2012). Evidence shows that for women affected by a perinatal mental disorder, 50% of their partners will develop a mental disorder (Johnston et al. 2004; Morrison et al. 2014). Mental disorder in the partner can have a significant impact on their relationship with the woman and with the baby as well as limiting the support the partner can provide (Austin & Highet 2017). Subsequently, the benefits of providing support to a new mother can amplify improvements to both short-term and long-term outcomes and made manifest within the broader family unit. When necessary support is not accessed, the cost can be great and may affect not only the woman's physical, psychological and social outcomes, but have deficit implications for the functioning of their family unit which may inhibit her opportunity for improved future outcomes (Austin, Highet & Committee 2011).

## **1.8 Perinatal Support Services for Women Who Gave Birth in a Private Hospital**

Comprehensive assessment of the risk of mental disorder is recommended for all women as part of coordinated, routine perinatal care (Austin & Highet 2017; National Institute for Health and Clinical Excellence (NICE) 2007; Women's

Health Committee of RANZCOG 2018). Yet, women who gave birth in an Australian private hospital were less likely to be assessed at all during the perinatal period for risk of mental disorder (Reilly et al. 2013). Risk of perinatal mental disorder for women who gave birth in a private hospital has not previously been investigated. This study aimed to determine the risk of postnatal mental disorder for women who gave birth in a private hospital compared to women who gave birth in a public hospital in NSW and explain the difference through the exploration and interpretation of maternal self-efficacy in stakeholder experience of social support services for women who gave birth in a private hospital.

Critically, the risk of developing a perinatal mental disorder is increased for women who gave birth in a private hospital (Kohlhoff et al. 2016). The Perinatal Mental Health National Action Plan (2011) has facilitated a number of initiatives, including antenatal psychosocial screening by a midwife, as part of routine care for women who give birth in a public hospital or birthing centre. In NSW, this is part of the state funded Safestart Program (NSW Department of Health 2009). However, for women who give birth in a private hospital this is at the discretion of their obstetrician and has not traditionally been part of routine care.

In Australia early parenting support is available through the child and family health services. All Australian women are entitled to universal access to postnatal care including, albeit not limited to, a schedule of outpatient visits with a Child and Family Health (CFH) nurse, also known as a community nurse, and visits, appointments or referral for families at risk to other government or private health or welfare services (NSW Health 2009). These nurses have specific training in postnatal mental health and routinely administer the psychosocial assessments that include the Edinburgh Postnatal Depression Scale (Nursing and Midwifery Office 2011). Child and Family Health nurses have a focus on early identification and intervention for parenting issues, child health and development and postnatal physical and mental health (Grant, Mitchell. & Cuthbertson 2017).

## 1.9 Thesis design

The thesis consists of eight chapters covering the different components of the study within each chapter:

**Chapter 1** has provided an introduction to the main elements of study; perinatal mental disorder, social support, self-efficacy, and the Australian private health care system.

**Chapter 2** is an integrative literature review of recently published research on early parenting support service outcome measures. This review determined that mental disorders were the outcome measure most commonly used, and an overview of these measures are provided. Although mental disorder is commonly used as an outcome measure of support services, the measurement of maternal self-efficacy may provide more accurate information on efficacy of the service. For women who gave birth in a private hospital; evidence on mental disorder and on stakeholder experience of social support has not been published.

In **Chapter 3** a description of the theoretical frameworks, study design, participants, data collection and analysis and trustworthiness are provided. This study used an explanatory sequential, mixed methods analysis of early parenting support services undertaken in two phases. Phase 1 provided a comparison of risk of mental disorder between women who gave birth in a private and a public hospital. Phase 2 explained the result of this analysis through stakeholder experience of social support services for women who gave birth in a private hospital. The three stakeholder groups that informed this study were new mothers; maternity clinicians; and maternity administrators. A staged approach enabled the data analysis from each prior stage to inform the collection and analysis of the subsequent stage. The obstetrician and paediatrician interviews informed the midwives and nurses focus group, which informed the women interviews. A summary paper of the findings from the

information from women and clinicians was provided to the administrators prior to their interview. This is described in detail in Chapter 3, along with the process of mixing the data between each phase. This chapter also identifies my motivation to conduct this research study and status as an insider researcher.

A manuscript of Phase 1, quantitative analysis based on health service data quantitative data collection, analysis and results are provided in **Chapter 4**. This has been submitted for publication to the peer reviewed journal *Archives of Women's Mental Health*. Phase 1 used statistical analysis of population data to determine the risk of developing a postnatal mental disorder for women who gave birth in a private hospital and compares these data to the risk for women who gave birth in a public hospital.

The main theme from the Phase 2 findings - *services to support emotional wellness in women who gave birth in a private hospital* - is provided in **Chapter 5**. This has been prepared as a manuscript and submission to the peer reviewed *Midwifery Journal*.

**Chapter 6** describes the qualitative findings on *infant feeding support services*. Women described feeling unsupported and unprepared for infant feeding, which left them less likely to be able to set and achieve realistic feeding goals. Women who perceived that they were not supported in feeding goals may have reduced maternal self-efficacy and be at increased risk of mental disorder. The theme of infant feeding support is discussed in relation to the recently published literature on service qualities.

**Chapter 7** describes the qualitative findings on *supporting parenting reassurance online*. Women explained their belief on the advantages of online peer-support and parenting information while clinicians and administrators explained their thoughts on the disadvantages of online parenting support.

Maternal self-efficacy may have been undermined, and the risk of mental disorder increased when women felt disapproval about their way of obtaining parenting reassurance. The theme of online *parenting reassurance* is discussed in relation to the recently published literature on peer-support groups and online forums.

In conclusion, **Chapter 8** provides an overarching description of the study findings and a discussion in relation to the recently published literature on social support services, self-efficacy and mental disorder for new mothers. To conclude, recommendations for a private hospital model of social support services are provided, along with study limitations and suggestions made for future research.

## **Chapter 2 – Integrative Review of Early Parenting Support Services Outcome Measures**

### **2.1 Introduction**

Early parenting support (EPS) is the subject term or keyword used to describe social support provided to women and their partners during the perinatal period. The nature of these services may vary by provision according to participant, program format, perinatal context, provider type, outcome measure and funding. Consequently, these services may include the following: antenatal psychosocial assessment, prenatal and postnatal education classes, home visiting, health centre visits, family doctor, obstetrician and paediatrician appointments, residential psycho-educational programs, breastfeeding or sleep support. These may be provided by a midwife, obstetrician, nurse, lactation consultant, paediatrician, general practitioner, practice nurse or a consultant without a healthcare background (Psaila, Hesson & Schmied 2011; Schmied et al. 2011). This review of published research provides both new information on service outcome measures, and a context on EPS for the mixed methods study of support services for first-time mothers who gave birth in a private hospital. The review aimed to describe the outcomes used to measure the effectiveness of early parenting support services.

### **2.2 Method**

Previous reviews of EPS services did not include qualitative studies despite the providers and researchers coming from a variety of clinical backgrounds and different philosophical perspectives. To address this gap an integrative review of the literature was undertaken as this includes both experimental and non-experimental methodologies, analysed through a systematic process, to provide a foundation of current knowledge (Whittemore & Knafelz 2005). This inclusion provided a diverse set of perspectives, which increased the generalisability of

the data and strengthened the veracity of the findings (Torraco 2005; Whittemore & Knafel 2005).

This integrative review of EPS services was based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Ottawa Hospital Research Institute & University of Oxford 2016). Further critical appraisal was undertaken using the Critical Appraisal Skills Program tools (CASP UK 2018). 2013). The review question was guided by the Population, Intervention, Comparison, Outcome, Timeframe (PICOT) approach in order to provide a systematic way of identifying the components of the issue (Stillwell et al. 2010). These components are listed in Box 1:

Box 1 – PICOT for Integrative Review

Population	New parents
Intervention	Support service
Comparison	Characteristics of outcome measures
Outcome	Type of outcome measures used
Timeframe	At start of the study from pregnancy to baby aged 1 year

### 2.2.1 Search Strategies

All database searches of published literature were guided by the UTS health librarian. As the study progressed, the researcher’s understanding of EPS developed; concomitantly the search strategy was enhanced: thereby three searches were undertaken to provide depth of analysis. The first search provided information on both formal and informal EPS. This gave a context for the study, however upon reflection there was insufficient information on formal support, or EPS services. This prompted a more focused search that provided new information on outcome measures of EPS services. To ensure recency, a third search was undertaken which included studies published since search 2 was undertaken. A summary of the searches is provided in Box 2.

## Box 2 – Summary of Searches

<p><b>Search 1 (January 2016)</b> Aim: To find information on EPS</p>
<p>Data Bases and Search Terms: EBSCO host (Medline, CINAL, SocINDEX and Psych INFO), “early parent*” (early parent, early parenting), or “new parent*” (new parent, new parents) and the MESH term, or keywords “social support”. PubMed, Google Scholar and ProQuest databases were searched using "social support" [MESH Terms] OR "social" [All Fields] AND "support" [All Fields] OR "social support" [All Fields]) AND (new parent [All Fields] OR new parenthood [All Fields] OR new parenting [All Fields] OR new parents [All Fields] AND early parenthood [All Fields] OR early parenting [All Fields] OR early parenting [All Fields] OR early parents [All Fields].</p>
<p>Search Limits: articles published in peer reviewed journals in English language between 2006 and 2016</p>
<p>Search Results: 792 articles met the search criteria. Articles retrieved: ProQuest = 22, PubMed = 95, EBSCO host = 638, Google Scholar = 37</p>
<p><b>Search 2 (April 2018)</b> Aim: To find information on EPS Services</p>
<p>Data Bases and Search Terms: MEDLINE, CINAHL PsychINFO, Academic Search Complete, SocINDEX, Scopus. Information on EPS service was based on three concepts, using both MESH terms and keywords. Concept 1 – mental health (MESH) OR mental disorder (keyword). Concept 2 – postnatal care (MESH) AND prenatal care (MESH) OR antenatal care (keyword) OR early parent* OR new parent*. Concept 3 - social support (MESH)(keyword).</p>
<p>Search Limits: articles published in peer reviewed journals in English language between 2007 and 2017.</p>
<p>Search Results: 770 articles met the search criteria. Articles retrieved: EBSCO host = 473, PubMed = 92, Google Scholar = 87 and ProQuest = 118.</p>
<p><b>Search 3 (March 2019)</b> Aim: To repeat search 2 and update the review with any studies published in 2018 and 2019.</p>
<p>Search Limits: articles published in peer reviewed journals in English language between 2017 and 2018.</p>
<p>Search Results: 68 articles met the search criteria. Articles retrieved: Medline = 10, CINAL = 6, Academic Search Complete = 9, PsychINFO = 10, SocINDEX = 1, SCOPUS = 32.</p>

Additional search strategies included a review of the references from the studies found in the initial search and an archive search of three specialist journals which regularly publish on EPS. These journals were *Birth: Issues in Perinatal Care*, *Australia and New Zealand Journal of Public Health* and *Archives of Women's Mental Health*. The title and abstract of each found article were reviewed and articles were discarded if they were duplicated or outside the inclusion criteria. Excluded studies were those that commenced outside the perinatal period (conception to baby's first birthday); focused on a specific diagnosis for the baby (e.g. attention deficit hyperactivity disorder, cystic fibrosis); focused on a specific diagnosis for the woman (e.g. hypertension, diabetes, arthritis, substance abuse); limited to a specific subgroup (preterm birth, neonatal intensive care, following perinatal loss); limited to a specific service (foster care, military, playgroups, parental separation) or undertaken in a country outside the top 50 for 2014 Human Development Index. Appendix 2 provides detail of the inclusion and exclusion criteria.

The remaining studies were critically appraised for rigour using the PRISMA Guidelines (Ottawa Hospital Research Institute & University of Oxford 2016). Based on CASP (Critical Appraisal Skills Program) three appraisal tools provided systematic assessment of the trustworthiness and of the value of each study. Examples of these tools are provided in Appendix 4. Studies identified as having a CASP (Critical Appraisal Skills Program) score of less than 70% were excluded. Relevance was classified as high, medium or low and those studies with a medium or low relevance were excluded. Exploration and integration of these studies provided contextual information on EPS services and provided focus on mental disorder as an outcome. Figure 2, Figure 3 and Figure 4 represent search 1, search 2 and search 3 to identify studies on early parenting support service.

Figure 2 – Search 1 to Identify Studies Early Parenting Support Service

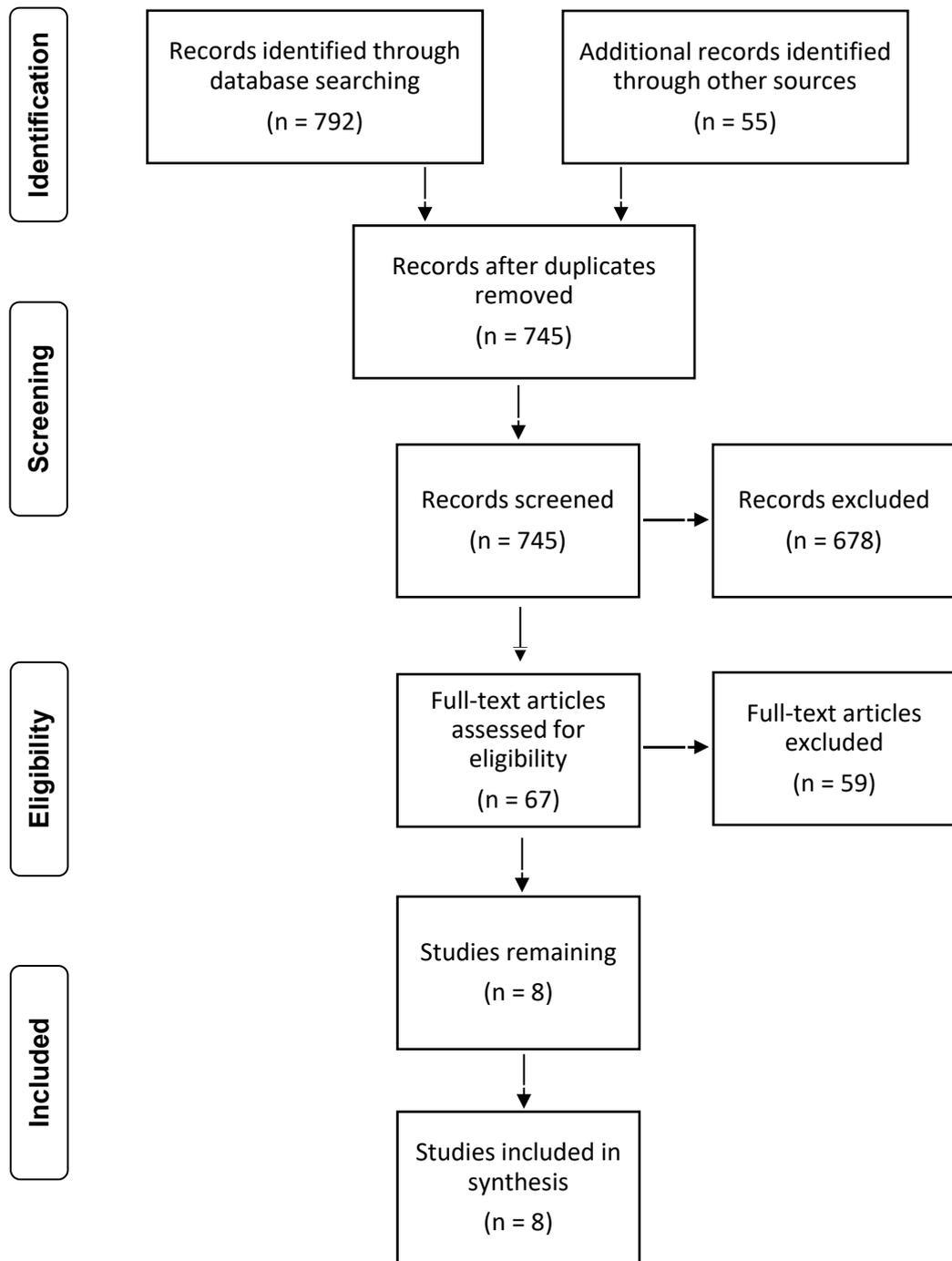


Figure 3 – Search 2 to Identify Studies Early Parenting Support Service

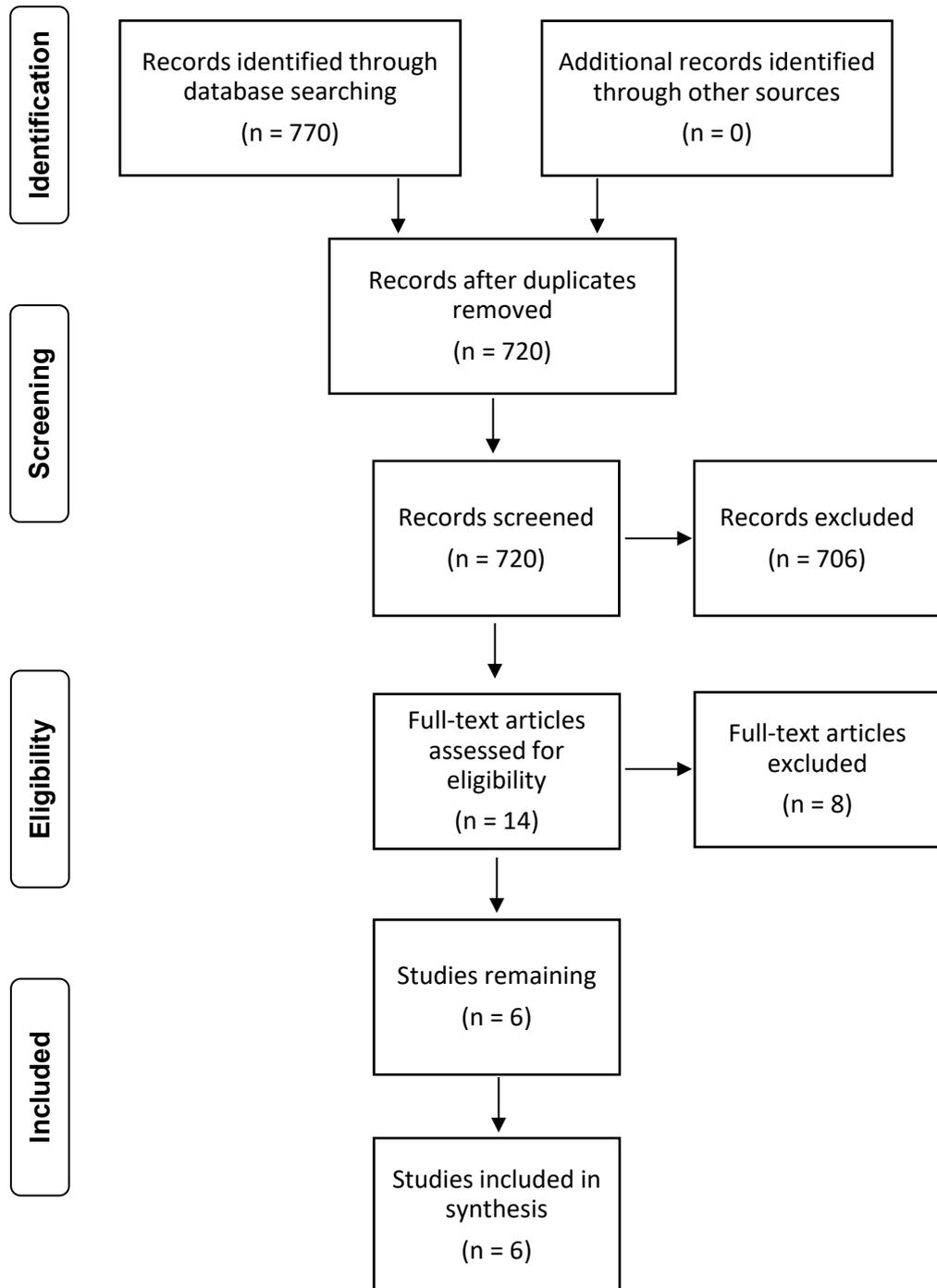
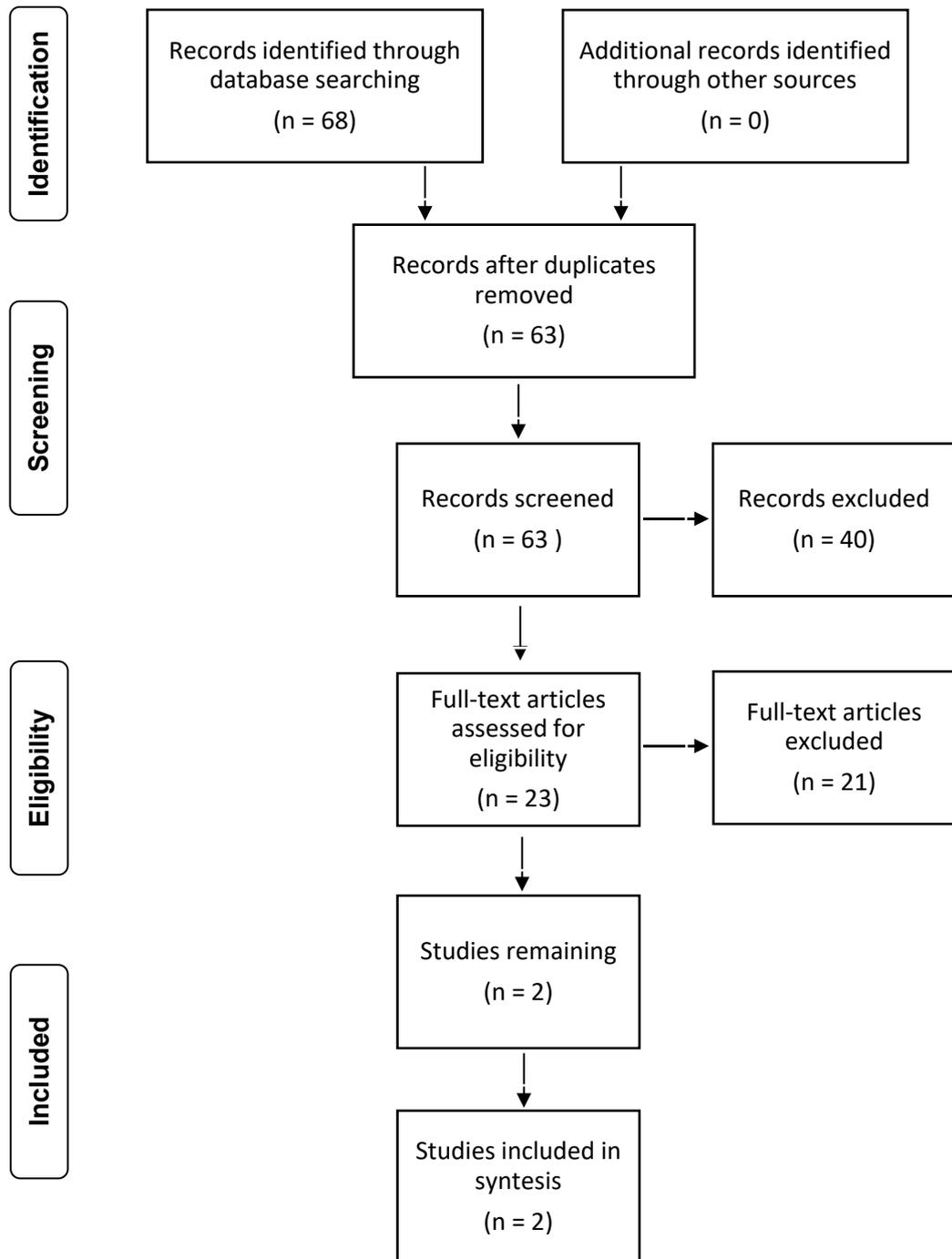


Figure 4 – Search 3 to Update Search of Studies Early Parenting Support Service



### **2.2.2 Results of Search**

The first search produced eight articles that provided context on EPS. The second search yielded information from six additional studies that were included in the review. This second search was then updated in 2019 and two recent publications were included, providing a total of 16 studies. Integration and exploration of the information from these studies has provided new information on mental health outcomes of EPS services.

### **2.2.3. Analysis of Outcomes of Early Parenting Support Services**

Initial analysis was undertaken following multiple readings of the 16 articles. A table of evidence was completed to compare and contrast the characteristics of each service and to describe the study outcome measures. Close examination illustrated that the complexity of outcome measures required a more comprehensive analysis. The articles were imported into NVivo 9.0 software to assist with data management and a content analysis was undertaken to develop themes. Content analysis provided a systematic method to uncover patterns as well as measure the frequency of different categories and themes (Vaismoradi, Turunen & Bondas 2013). The content analysis provided a description of the frequency of the themes as well as the relationship between the themes of: mental health (or perinatal common mental disorders), depression, anxiety, self-efficacy and stress and ensured that commonalities across studies were reported in the review.

## **2.3. Results of Analysis**

All of the studies were published in the 12 years prior to this review; between 2007 and 2019. In order to compare studies undertaken in countries that have similar socioeconomic characteristics to Australia, all studies included in this review were classified in the 'top 50 for 2014 Human Development Index'. The table of evidence in Appendix 4 provides a summary of each study. Boxes 3.1 –

3.4 provide summaries of the studies by country, type of EPS service, study aim and study design.

The studies were undertaken in seven countries; Australia, England, USA, Switzerland, Canada, Spain and Singapore.

Box 3.1 – Summary of EPS Service Studies by country

Australia	(Corr, Rowe & Fisher 2015) (Fisher et al. 2016) (Fowler, Rossiter, Maddox, et al. 2012) (Hauck et al. 2012) (Kohlhoff et al. 2016) (Rowe & Fisher 2010) (Small et al. 2014a)
England	(Barnes, Senior & MacPherson 2009) (Barnes et al. 2017)
USA	(Duncan & Bardake 2010) (Roman et al. 2009)
Switzerland	(Kurth et al. 2016) (Razurel & Kaiser 2015)
Canada	(Goulet, D'Amour & Pineault 2007)
Spain	(Perez-Blasco, Viguier & Rodrigo 2013)
Singapore	(Shorey, Yap & Hong-Gu 2015)

A wide variety of study aims and designs were identified as well as variety in the type of EPS services that were investigated. The seven types of EPS services investigated are summarised in Box 3.2.

Box 3.2 – Type of EPS Services

General postnatal support services	(Goulet, D'Amour & Pineault 2007; Kurth et al. 2016; Razurel & Kaiser 2015)
Residential services	(Fowler, Rossiter, Maddox, et al. 2012; Hauck et al. 2012; Rowe & Fisher 2010)
Group-support services	(Barnes et al. 2017; Corr, Rowe & Fisher 2015; Small et al. 2014a)
Psychoeducational programs	(Duncan & Bardake 2010; Fisher et al. 2016; Shorey, Yap & Hong-Gu 2015)
Home visiting services	(Barnes, Senior & MacPherson 2009; Roman et al. 2009)
Prenatal psychosocial assessment	(Kohlhoff et al. 2016)
Breastfeeding support service	(Perez-Blasco, Viguer & Rodrigo 2013)

Five study aims were identified. The study aims were to determine effectiveness, explore experience, provide evidence of value, determine preventive effect and develop a measurement tool. These are summarised in Box 3.3.

Box 3.3 – Study Aims

Determine effectiveness	(Barnes et al. 2017; Duncan & Bardake 2010; Goulet, D'Amour & Pineault 2007; Hauck et al. 2012; Perez-Blasco, Viguer & Rodrigo 2013; Roman et al. 2009; Small et al. 2014a)
Explore service experience	(Corr, Rowe & Fisher 2015; Fowler, Rossiter, Maddox, et al. 2012; Kurth et al. 2016; Shorey, Yap & Hong-Gu 2015)
Provide evidence of service value	(Barnes, Senior & MacPherson 2009; Corr, Rowe & Fisher 2015; Kohlhoff et al. 2016)
Determine preventive effect	(Fisher et al. 2016)
Create and validate a scale	(Razurel & Kaiser 2015)

Although there were five different types of study design, 15 of the studies used quantitative data through randomised control trial, descriptive statistics and mixed methods study designs. Only three studies used qualitative data. The study designs are summarised in Box 3.4.

Box 3.4 – Study Designs

Randomised controlled trial	(Barnes, Senior & MacPherson 2009; Barnes et al. 2017; Fisher et al. 2016; Perez-Blasco, Viguier & Rodrigo 2013; Roman et al. 2009; Small et al. 2014a)
Descriptive statistics	(Corr, Rowe & Fisher 2015; Goulet, D'Amour & Pineault 2007; Hauck et al. 2012; Kohlhoff et al. 2016; Rowe & Fisher 2010; Shorey, Yap & Hong-Gu 2015)
Qualitative descriptive designs	(Fowler, Rossiter, Maddox, et al. 2012; Kurth et al. 2016)
Mixed methods study	(Duncan & Bardake 2010)
Validation design	(Razurel & Kaiser 2015)

Variation occurred between the studies. The number of participants in experimental design studies ranged from 21 to 10,444. For non-experimental studies the number of participants ranged from 18 to 109. This significant difference in the number of participants was not explained by study method. There were also variations in the study methods utilised. Data were collected in nine studies using questionnaires; in two studies by in-person interview (Barnes, Senior & MacPherson 2009; Shorey, Yap & Hong-Gu 2015) and one study each by: telephone interviews (Fowler, Rossiter, Maddox, et al. 2012), file audit (Kohlhoff et al. 2016) and focus groups (Kurth et al. 2016). This variation in service, study aim, study design and study method indicated inconsistency to the measurements used to determine the outcome of EPS services. The timing

of both the EPS service provision and the timing of the study varied throughout the perinatal period, from first trimester of pregnancy through to two years after birth. In all of the studies the participants were women, only two of the studies included partners (Fowler, Rossiter, Maddox, et al. 2012) Kurth et al. 2016).

### **2.3.1 Domains of Outcome Measurements**

As well as variation in EPS services and consequently in the associated studies, there was also variation in the type of outcomes that were used to measure the effect of these services. The EPS service outcomes that were measured in these 16 studies can be described based on the literature by eight domains: mental health, maternal self-efficacy, stress, fatigue, parenting skills, intimate partner relationships, physical health and infant outcomes. Within these eight domains, measurement of the specific outcomes showed even further variation. These domains of outcome measure are listed in Box 4.

Box 4 – EPS Service Domains of Outcome Measurement

Domain 1	Mental Health	Mental health Mental disorder Depression incidence Depression symptoms Anxiety Common perinatal mental disorders
Domain 2	Parenting Self-Efficacy	Parenting self-efficacy Parenting confidence Experience of motherhood
Domain 3	Stress	Parenting stress Psychological distress Psychosocial risk factors
Domain 4	Fatigue	Extreme tiredness
Domain 5	Parenting Skills	Parenting competence Acquisition of knowledge Parenting skills
Domain 6	Intimate partner / family relationships	Intimate partner relationship satisfaction Domestic violence Family function
Domain 7	Physical Health	General health Physical health Health related quality of life Health care utilization (early parenting Centre usage, emergency department visits, family doctor visits, hospital admissions)
Domain 8	Infant Outcomes	Breastfeeding duration Maltreatment Cooperativeness

### **2.3.2 Mental Health Outcomes**

For the purpose of this study the review focused on domains one, two and three. Domain 1, mental health included measures of mental disorder, depression and anxiety and perinatal common mental disorders. Domain 2 included factors that may protect against mental disorder, self-efficacy, confidence and experience. Domain 3 included factors that may increase the risk of mental disorder such as stress, distress and psychosocial risk factors.

Mental health was the most commonly used outcome measure of EPS services, being apparent in 12 of the studies;(Barnes, Senior & MacPherson 2009; Barnes et al. 2017; Corr, Rowe & Fisher 2015; Duncan & Bardake 2010; Fisher et al. 2016; Goulet, D'Amour & Pineault 2007; Hauck et al. 2012; Kohlhoff et al. 2016; Razurel & Kaiser 2015; Roman et al. 2009; Rowe & Fisher 2010; Small et al. 2014a). In some studies depression and anxiety were used as a diagnosis of mental disorder while in others they determined symptoms. Each of these outcome measures are discussed in relation to each study.

#### ***Depression***

Depression was the most commonly measured mental health outcome of EPS services. The review of studies indicated that EPS services used depression to measure service outcome and that EPS reduced depression. In these studies, depression was measured in four ways: symptoms of depression, Edinburgh Postnatal Depression Scale (EPDS) score, diagnosis of depression or as a positive response to a targeted question.

One study showed that having a registered nurse on the home visiting team reduced depressive symptoms (Roman et al. 2009) and another showed participating in a gender informed education program reduced mild to moderate depression (Fisher et al. 2016). In a study of a postnatal home visiting program, women with high baseline stress had a significant reduction in depressive

symptoms where a registered nurse was part of the team than when the clinical team consisted of a community health worker only (Roman et al. 2009). For women with low psychosocial resources, being assigned to a home visiting team which included a registered nurse also led to reduced levels of depressive symptoms (Roman et al. 2009). Although there were significantly lower levels of clinically-relevant mild to moderate symptoms of depression for first-time mothers who participated in a gender informed postnatal psychoeducational program compared to participants who did not participate in the program (Fisher et al. 2016). For participants in one residential program depressive symptoms were reduced, although there was a small group who continued to report depressive symptoms of sufficient severity to indicate probable depression at the one month follow up assessment (Rowe & Fisher 2010). In a study on mothers' satisfaction with social support, the provision of professional esteem support correlated with less postnatal depressive symptoms (Razurel & Kaiser 2015). Satisfaction with social support during the postnatal period explained 13.1 percent of the variance in postnatal depressive symptoms, after controlling for other variables, that is, the greater the woman's satisfaction with support, the lower the depressive symptoms (Razurel & Kaiser 2015). Postpartum contact with any health professional decreased symptoms of depression (Goulet, D'Amour & Pineault 2007). The study of antenatal psychosocial assessment found that depressive symptoms were present in six percent of the 993 women (Kohlhoff et al. 2016). Home visiting decreased the diagnosis of major or minor depression for two to 12 months in a supported group (32.6 percent) compared to a matched control group (26.1 percent) or an unsupported group (27.3 percent) (Barnes, Senior & MacPherson 2009). The studies that demonstrated reduction on depressive symptoms were home visiting, psychoeducation, residential and professional support services.

Diagnosis of depression was used in some studies. In one study, depression was investigated using a single question on sadness. This population level study of a state-wide maternal health program used a question about feeling sad, blue or depressed for two weeks or more in the last two years to determine outcome. One quarter of the women in the intervention group and one quarter

on the women in the comparison group reported that they felt this way. Although, the result indicated no difference between the two groups, it may be inaccurate to use a single question to determine outcome. (Small et al. 2014a)

### ***Anxiety***

EPS service studies also used anxiety as one outcome measure and EPS was shown to reduce anxiety. Anxiety was the second most commonly measured mental health outcome of EPS services, measured in four of the studies (Duncan & Bardake 2010; Fisher et al. 2016; Hauck et al. 2012; Razurel & Kaiser 2015). Anxiety during pregnancy was reduced following a mindfulness-based childbirth and parenting education program (Duncan & Bardake 2010). EPDS anxiety subscale scores were not lower for women who participated in an EPS day-stay program (Fisher et al. 2016). However, the authors did find a significant difference in scores over time, suggesting that the time frame of measurement may be important. Following attendance at psychoeducational programs for first-time parents, there were significantly lower levels of clinically-relevant mild to moderate symptoms of anxiety among women in the intervention arm than in the control arm six months postpartum (Fisher et al. 2016).

The EPDS anxiety subscale was used to measure anxiety in one study of a day-stay program for primiparous and multiparous women. There was a significant decrease in EPDS anxiety subscale score from prior to admission to one week after admission, however there was no significant difference following EPS day-stay in the anxiety subscale score between intervention and control groups (Hauck et al. 2012). Of importance, following EPS day-stays, anxiety scores decreased significantly over the study period in both intervention and control groups (Hauck et al. 2012). This may suggest that the timing of the measurement is important, and that time may ameliorate anxiety for new parents.

The study of general postnatal support services showed that there was a negative correlation between a woman's satisfaction with the level of support of their self-esteem by professionals in the prenatal period and their anxiety levels (Razurel & Kaiser 2015). In the postnatal period satisfaction with esteem support from professionals negatively correlated with postnatal anxiety (Razurel & Kaiser 2015). A reduction in anxiety symptoms was an outcome of both postnatal psychoeducational programs (Fisher et al. 2016), and postnatal mindfulness-based intervention for breastfeeding women (Perez-Blasco, Viguer & Rodrigo 2013).

### ***Perinatal Common Mental Disorder***

The over-arching terms of Perinatal Common Mental Disorders (PCMD) or mental health were measured as an outcome of EPS services, separate to a diagnosis of either anxiety or depression, in two of the studies (Fisher et al. 2016; Goulet, D'Amour & Pineault 2007). Perinatal common mental disorders are defined as depression, generalised anxiety disorder and phobia occurring in the perinatal period.

PCMD prevalence was reduced following a six week postnatal psychoeducational programs for first time parents called *What Were We Thinking* (Fisher et al. 2016). At six months after the program was completed, the full psychoeducational program (seminar included) was regarded as being effective in reducing PCMD. In particular a significant difference was seen in PCMD between intervention and two control groups (full intervention without seminar and no intervention (Fisher et al. 2016). The cohort who undertook the intervention without the seminar showed no significant difference in common perinatal mental disorders at six months after undertaking the program without the seminars, and there was no change in CPMD for the control group (Fisher et al. 2016). This suggests that the seminars are necessary and when included the prevalence of PCMD is reduced. The Canadian study on EPS service experience demonstrated that, after adjusting for confounders, an early contact

with a health professional after discharge, irrespective of the type of contact, was significantly associated with a better maternal mental health status one month after childbirth (Goulet, D'Amour & Pineault 2007). Hence, due to the variation in methodology and the wide range of outcomes that were measured, it is difficult to show if EPS services reduced PCMD.

### **Tools**

All of the studies utilised validated tools to measure a change in mental health and to measure if the change was sustained after the service or program was completed. The tools are listed in Box 5. The most commonly used tool to measure mental health was the EPDS to detect depressive symptoms or diagnose depression. One population-level study of a state-wide maternal health program used an EPDS cut-off score of 13 to demonstrate probable clinical depressions. This study showed that at two years postpartum, 13.4 percent of women in the intervention group and 13.1 percent of women in the control group were probably clinically depressed, suggesting that the time of measurement may be an important factor (Small et al. 2014a).

Both the cut-off and a mean score of EPDS was used in an Australian study on outcomes of a residential program. This study demonstrated that the mean EPDS declined from 17.1 to 10.6 by one month post discharge, for the 97 parents who score above 13 at admission, demonstrating efficacy of the program for the probably depressed cohort (Rowe & Fisher 2010). In another Australian study of 178 women who attended a day-stay program, there was a significant decrease in EPDS score between preadmission and at four weeks following discharge (Hauck et al. 2012). However, in both the intervention groups and in the control group, postnatal depression mean scores decreased significantly over the study period (Hauck et al. 2012).

In addition to the EPDS, five other tools were used in these studies were; Structured Clinical Interview (Barnes, Senior & MacPherson 2009), Composite

International Diagnostic Interview (CIDI) (Corr, Rowe & Fisher 2015), Pregnancy Anxiety Scale (Duncan & Bardake 2010), Centre for Epidemiological Studies Depression Scale (Duncan & Bardake 2010; Goulet, D'Amour & Pineault 2007), Antenatal Risk Questionnaire (Kohlhoff et al. 2016), State-Trait Anxiety Inventory (Razurel & Kaiser 2015) and Profile Of Mood States (Rowe & Fisher 2010). The use of six different tools to measure mental disorder outcome following EPS programs shows wide variation that makes it difficult to compare programs and facilitate benchmarking that could improve outcomes. The tools are defined in Box 5.

## Box 5 – Summary of Assessment Tools

Name	Abbreviation	Definition
Edinburgh Postnatal Depression Scale	EPDS	Adequate sensitivity and specificity to identify anxiety and depressive symptoms in the antenatal and postnatal period
Structured Clinical Interview for DSM V	SCID	A semi structured interview for making the major diagnostic symptoms
Center for Epidemiologic Studies Depression Scale	CES-D	A brief self-report questionnaire to measure depressive symptoms severity in the general population
Antenatal Risk Questionnaire	ANRQ	A screening tool used to identify pregnant women who are at risk for developing mental health problems
Spielberger State-Trait Anxiety Inventory	STAI	A self-reported instrument to measure transient momentary emotional status that results from situational stress, state anxiety
Profile of Mood States	POMS	A psychological rating scale used to assess transient, distinct mood states

### 2.3.3 Parenting Self-Efficacy

Parenting self-efficacy, or parenting confidence, was measured as an outcome of EPS services by four studies (Hauck et al. 2012; Razurel & Kaiser 2015; Roman et al. 2009; Rowe & Fisher 2010). Self-esteem was the outcome measured in one study of home visiting, that compared a nurse led care team and community carer only team. As there was no difference in self-esteem between groups, following the program, this may indicate that both team models contributed to facilitate self-esteem (Roman et al. 2009). Parenting self-efficacy was also used as a measure of outcome for of 235 women, in a validation study of postnatal support services. Use of a self-administered questionnaire a

relationship was revealed between satisfaction with social support and increased parental self-efficacy (Razurel & Kaiser 2015). More practical evidence may have been obtained if qualitative data had been collected and analysed as part of the quantitative studies.

Self-rated maternal confidence was the outcome measured in one study of residential services. This study determine that confidence improved over time, with 94% of women describing themselves as fairly or very confident, which had increased to 96 percent at six months post-discharge, although this may be attributed to the program it may also be due to the parents naturally developing confidence over time (Rowe & Fisher 2010). In a study of 178 women attending a day stay program, there was a significant increase in maternal confidence in the intervention group at four weeks, measured using the parenting sense of competence scale (Hauck et al. 2012). This intervention group also had significantly higher levels of confidence than the control group, when measured at a four weeks follow-up visit (Hauck et al. 2012). The woman's satisfaction with support (emotional, esteem and informational support) was measured in one study that looked at postnatal support services in Switzerland. The authors demonstrated the greater the prenatal self-efficacy had been than the higher the satisfaction with postnatal support, suggesting that those with greater self-efficacy received more benefits from the support (Razurel & Kaiser 2015).

Confidence was used as an outcome measure in a qualitative study using telephone interviews to gather data from women who had attended residential and day stay intervention, an increase was shown in self-efficacy one month after discharge from residential early parenting centres, 86% reporting that they felt more confident following their stay (Fowler, Rossiter, Maddox, et al. 2012). The Maternal Confidence Scale was used to measure increased perception of confidence, which was increased further following discharge (Hauck et al. 2012). However, in both studies, data were gathered only one month after discharge, which does not show sustained improvement. Further research may unveil an optimum time for follow-up measurements to be obtained. Self-

efficacy appeared to increase following postnatal EPS service providing mindfulness training for breastfeeding women (Perez-Blasco, Viguer & Rodrigo 2013).

### **2.3.4 Stress**

Stress, a precursor to mental disorder, was measured as an indicator of mental health in three studies (Duncan & Bardake 2010; Roman et al. 2009; Small et al. 2014a). Stress was found to be reduced following a postnatal mindfulness-based intervention for breastfeeding women (Duncan & Bardake 2010).

Following home-visiting, women in the RN-led team had less self-perceived stress than women in the community carer team (Roman et al. 2009). This may have been because the support service assisted women to manage stressors. This study also showed that those women with low psychosocial resources had the greatest reduction in stress following home visiting (Roman et al. 2009). This highlights even more that support may ameliorate stress. The population maternal health intervention also used stress to measure outcome of service and although there was no difference in total stress score on the parenting stress index between the intervention and the control groups the measure was taken at two years following the support service and by this time the intervention group may have been less sensitive to the original intervention or the control group may have found alternative ways to manage stress (Small et al. 2014a).

## **2.4 Discussion**

This integrative review has demonstrated that support services can improve outcomes for new parents. Mental disorder was most commonly used to measure the effectiveness of the services. However, there was no standard method of study and no standard outcome for EPS services. There was no standardisation to three main factors that may affect the outcomes; 1) fidelity of the service (both content and service provider experience and training, 2) time in the life stage of the participant that the measurement was made and 3) use of a binary diagnosis of mental health versus mental illness.

Across the 16 studies there was no standardisation in presentation of information on fidelity of the service, such as the content and timing, nor the fidelity of the service provider, such as their clinical or adult education background, their support service experience or program training. The fidelity, or the amount that the program developer intention was implemented, affects the credibility and utility of any research undertaken (Carroll et al. 2007; Schmidt et al. 2017). For example, in a psychoeducational service a more robust course content or more experienced presenter can increase knowledge transfer. These factors may be more accountable in evaluation with a more standardised presentation of service fidelity.

There was variation in the timing of the intervention and the timing of the measurements, so that the life stage of the participants, and therefore their parenting experience, varied between studies. Both the timing of the service and the measurement of outcomes may affect the study results. In these 16 studies the timing varies between conception and 24 months postpartum. In two of the studies data were gathered only one month after discharge, which may have been too soon to show sustained improvement EPS (Fowler, Rossiter, Maddox, et al. 2012; Hauck et al. 2012). Improvement in parent outcome measurements may have been equally related to the developmental stage of the infant (Hauck et al. 2012). Likewise experience with a previous baby may affect the outcome of the service yet some studies included both primiparous and multiparous women (Hauck et al. 2012). As the transition from not being a parent to being a parent is so significant the issues and the progress may be very different between first-time parents and those parents who have been through the transition already (McKim 1987). Comparison between services may be more revealing if cohorts included only one or the other type of participant.

Use of a binary diagnosis of mental disorder, either yes to mental disorder or no to mental disorder (i.e. yes to mental health) may underestimate the benefit of EPS services. Dividing women into only two groups (those women with a

diagnosis of mental disorder and those women without a diagnosed mental disorder) may be an oversimplification, as women with clinically significant symptoms may not meet the criteria for a diagnosis of mental disorder. The authors of one of the studies suggested that a three-group categorisation, or a vulnerability gradient, would have revealed a reduction in symptomatology following this intervention, as more women had clinically significant symptoms that did not meet diagnostic criteria than diagnosable disorders (Fisher et al. 2016). Some of the outcome measures may be more appropriate to provide epidemiological information while other measures may be more appropriate for individual comparison of progress.

## **2.5 Conclusion**

As previous reviews did not include qualitative studies this integrative review of recent literature has provided useful information. Mental disorder was the most common outcome used to measure EPSS. However, there was great variation within measurement of mental disorder as well as fidelity of the service and life stage timing of both service provision and of outcome measurement. The use of so many different outcomes to measure EPS services makes it difficult to interpret improvement for new parents. A standardisation of outcome measurement may allow comparison and development of services and improve outcomes for women, their babies and their families.

## **Chapter 3 – Methodology**

### **3.1 Introduction**

This study aimed to describe early parenting support services in relation to parenting self-efficacy and risk of mental disorder for women who gave birth in a private hospital are described in this study. In order to both determine and explain risk of mental disorder a mixed methods study design was used. This two phased mixed methods research study includes Phase 1, a quantitative study and Phase 2 was a qualitative study. This chapter provides the Research Aim and Objectives as well as the method and methodology of Phase 2 of the study: Theoretical Frameworks, Study Design, Data Collection, Data Analysis, Research Trustworthiness and Ethical Considerations. The method of the quantitative study is described in Chapter 4.

### **3.2 Research Aim and Objectives**

The main aim of this study was to examine early parenting support services for women giving birth in a private hospital and how these support services influence perinatal mental disorder. There were two research objectives: 1) to determine the risk of postnatal mental disorder for women who gave birth in a private hospital compared to women who gave birth in a public hospital in NSW; and 2) to explain the difference through the exploration and interpretation of maternal self-efficacy in stakeholder experience of social support services for women who gave birth in a private hospital.

### **3.3 Theoretical Frameworks**

The study was framed by two theories; social exchange (Homans 1974) and self-efficacy theory (Bandura 1997), both of these have been described in Chapter 1. Below is a summary of each theory as it relates to this study on early parenting support services and maternal self-efficacy.

### **3.3.1 Social Support Underpinned by Social Exchange Theory**

Social support can be defined as the human climate that has a significant role in an individual's response to life stressors and consequently, maintenance of their health (Brandt & Weiner 1981). Social support is more specifically regarded as the actual or perceived exchange of resources that improves coping, esteem, belonging and competence (Gottlieb 1985b). 'Support' can be classified as: emotional (feeling trusted or understood), physical (in the form of direct assistance), support that provides information or support that enables an individual to appraise themselves (Wills 1985). Further consideration of the relevance of these classifications, makes the theory of "social exchange" one of the most prominent frameworks used to examine the fundamental human function of social support (Brandt & Weiner 1981; Patt 2013). In particular, "Social Exchange theory" provides a sociological model that explains that the voluntary exchange of resources, tangible or intangible, costly or rewarding, results in the development of mutual trust and affiliation (Homans 1974). In such cases, human behaviour is aimed at maximising social gain, thus relationships are formed if it maximises benefit and minimises cost to self (Homans 1974). The benefit minus this cost equals outcome, or if the outcome of a relationship results in social profit, a commitment is made to the relationship (Homans 1974). When we give to others, we try to receive as much in return; and when we receive from others, we are under pressure to give back to them, rendering all relationships as having elements of "give and take"; however, the balance of this exchange is not always equal (Homans 1974).

For a new mother informal social support can be provided by her partner, her own mother, her family, friends or neighbours, while formal social support, or social support services, are usually provided by health care professionals (Razurel et al. 2013). This study focused on formal social support, or social support services. In this study the theoretical framework of social exchange was used to operationalise the theory of self-efficacy in order to determine private hospital stakeholders' experience of social support services for new mothers;

and by association, provide a comprehensive understanding of the-relationship between social support and perinatal mental disorders.

### **3.3.2 Self-Efficacy Theory**

The concept of “self-efficacy” was developed by Albert Bandura (1977). Bandura’s theory of “self-efficacy” is a person’s belief in their own ability to successfully perform a certain task, as such it determines effort, persistence and the strategy utilised in accomplishing a set task and is one of the most powerful predictors of how well a person will perform (Bandura 1977; Bandura 1997). “Protective coping” or “active coping” have been linked to general self-efficacy (Rothmann & Van Rensburgh 2002). Self-efficacy sources of information are past experience (or performance outcomes), vicarious experience (or modelling), psychological feedback (or emotional status) and verbal persuasion (or coaching) (Bandura 1997). There are four ways self-efficacy regulates human function: cognition, motivation, affect and hope (Bandura 1997). Individuals with high levels of self-efficacy have reduced stress levels and a lower vulnerability to depression (Bandura 1997). Conversely, individuals with low self-efficacy have a higher vulnerability of falling victim to stress and depression (Bandura 1997). Characteristics of individuals with high self-efficacy and characteristics of individuals with low self-efficacy have been identified by Bandura (1993) to provide ten determinants of self-efficacy.

Self-efficacy theory underpins the concept of parenting confidence or parenting self-efficacy and has been used in parenting confidence studies (Črnčec, Barnett & Matthey 2008, 2010). When a mother has a low level of self-efficacy there is an increased risk of depression and anxiety through unfulfilled aspirations, low social esteem and reduced ruminative thought control (Bandura 1997). Increased self-efficacy both raises and mediates the benefits of social support, whilst decreased self-efficacy reduces the ability to access and use social support (Bandura 1997).

### **3.3.3 Social Support Services, Maternal Self-Efficacy and Maternal Disorder**

The relationships between social support and mental health, between social support and self-efficacy and between self-efficacy and mental health have been well established in new mothers. However, the relationship between mental disorder, social support services and maternal self-efficacy in women who give birth in a private hospital has not previously been described. The objective of Phase 2 was to explain the difference through the exploration and interpretation of maternal self-efficacy in stakeholder experience of social support services for women who gave birth in a private hospital.

### **3.4 Study Design**

To describe early parenting support services an explanatory, sequential, mixed methods study was undertaken. To understand the relationship between postnatal mental disorder, social support services and self-efficacy firstly the risk of postnatal mental disorder was quantified statistically. The information obtained from this analysis then prompted qualitative exploration of self-efficacy within information on support services in order to explain the statistical analysis. The quantitative phase of this study compared the risk of developing a perinatal mental disorder for women who gave birth in a private hospital and women who gave birth in a public hospital. The qualitative phase of this study described stakeholder experience of early parenting support services in relation to maternal self-efficacy and risk of developing a mental disorder. This mixed method study of social support services was underpinned by a combination of qualitative and quantitative philosophical assumptions; these assumptions guided the collection, analysis and mixing of data as well as interpretation of results and findings. The intention of this study design was to use the inherent strengths of both quantitative methods (large sample size, trends and generalisations) and qualitative methods (small sample size, detail and depth) (Creswell & Plano Clarke 2007; Ivankova, Creswell & Stick 2006; Johnson & Onwuegbuzie 2004; Tashakkori & Teddlie 1998). Furthermore, the perinatal period requires a variety of physical and emotional changes that may be

affected by social support. To explore this increasing complexity, a mixed methods design facilitated enhanced analytical opportunities. In particular, findings from an integrative review of published literature provided information that mental disorders were the most commonly used outcomes of social support services, described in Chapter 2. This informed analysis of the quantitative data on postnatal mental disorders.

As the most common outcome of the access to social support was the reduced risk of developing a mental disorder, the quantitative analysis used descriptive statistics to determine risk of mental disorder for new mothers who gave birth in a private hospital compared to a public hospital. The qualitative component provided new information of stakeholder experience of support services for women who gave birth in a private hospital. The pragmatic underpinnings of mixed methods research ensured findings have practical application (Johnson & Onwuegbuzie 2004).

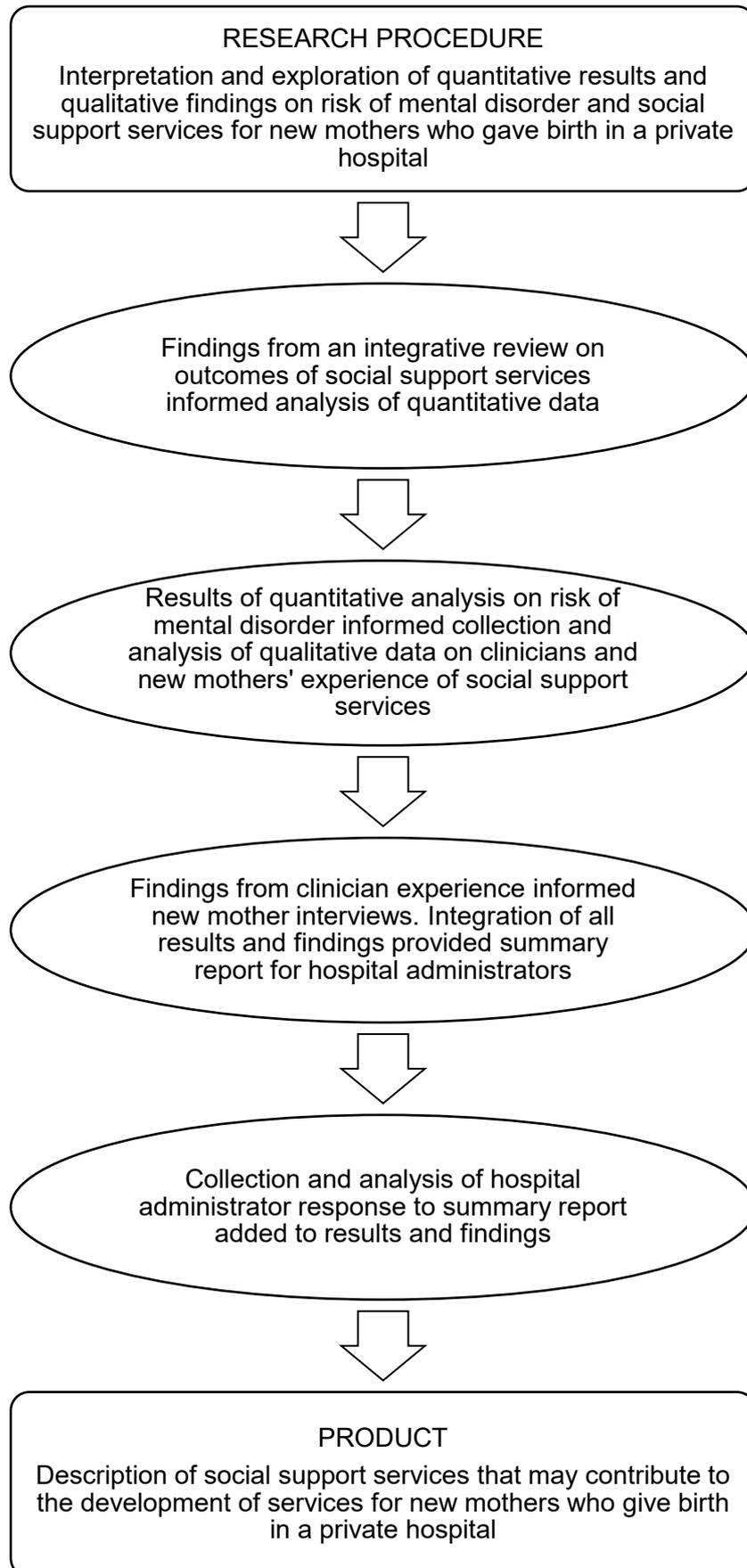
Pluralism, the main feature of mixed methods research, enables superior research to be undertaken through evolution beyond assumptions of either quantitative or qualitative research. This approach enhanced the strengths of each methodology, whilst concurrently minimising any inherent weakness, to provide findings that have practical application (Ivankova, Creswell & Stick 2006; Johnson & Onwuegbuzie 2004). Thus, the use of statistical description of quantitative data on the outcome of support services, coupled with thematic and template analysis of the collected data on the experiences of both providers and new mothers, has provided warranted assertions about social support across the scope of the enquiry (Johnson & Onwuegbuzie 2004).

The explanatory design required analysis of the first (quantitative) phase which informed the data collection of the second (qualitative) phases (Ivankova, Creswell & Stick 2006). The Phase 1 analysis used statistical description of the 2011 Perinatal Data Collection to compare differences by mental disorder as an

outcome of support services by funding type. The result of the Phase 1 analysis was used to guide interview questions for the subsequent qualitative data collection on experience of social support services from clinicians, women and administrators (Figure 5 depicts the research design). The quantitative findings provided a foundation and context for the qualitative research phase. This enabled the qualitative findings to be foregrounded as the aim of the study was to provide a description of social support service experiences (Ivankova, Creswell & Stick 2006). Throughout this exploration an inductive qualitative process was used, expanding the parameter from the participant's experience to allow a more representative broad picture to be developed (Minichiello et al. 2004).

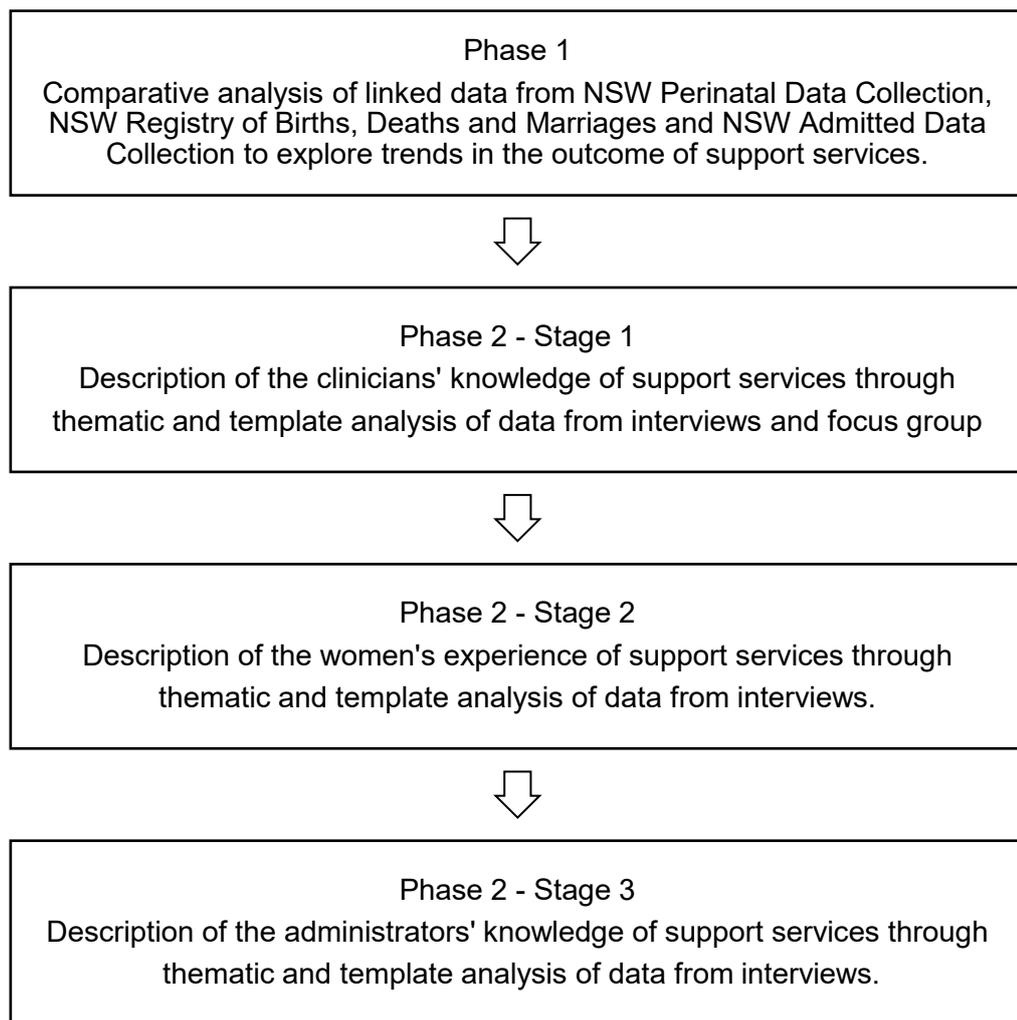
There were three stages of exploration and interpretation of EPS service experiences in Phase 2. Stage 1 explored and interpreted the clinician's knowledge of support services for women who gave birth to their first child in a private hospital. Stage 2 explored and interpreted the experiences of the women themselves on support services. Stage 3 provided hospital administrators with a summary of the findings from the women and clinicians, then explored and interpreted the administrators' knowledge of support services.

Figure 5 - Research Design for mixed methods study design



This sequential approach allowed the quantitative data analysis to provide a broad understanding of the research problem and the qualitative analysis to explain participants' experiences (Creswell & Plano Clarke 2007; Tashakkori & Teddlie 1998). Finally, the results of all phases were integrated to allow discussion of the study outcomes (Phases and Stages are illustrated in Figure 5).

Figure 6 – The Phases and Stages on Early Parenting Support Services



### 3.4.1 Phase 1 – Comparison of Postnatal Mental Disorder for Public and Private Hospitals

Phase 1 of the study investigated risk of mental disorder as the most commonly reported outcome of social support services. This statistical description focused on admission of primigravid women, with a primary diagnosis of mental

disorder, in the first 12 months following birth. This phase utilized descriptive statistics from a population-based cohort study that linked data from the New South Wales (NSW) Perinatal Data Collection, NSW Registry of Births, Deaths and Marriages, and the NSW Admitted Patients Data Collection from 1 January 2003 to 31 December 2009. The New South Wales perinatal data collection is population-based data, collected by midwives, from mothers and from hospital records. Consequent analysis determined the difference in postnatal admissions with a primary diagnosis of mental disorder for women who gave birth in a private hospital compared to women who gave birth in a public hospital. This statistical analysis informed the development of the protocol to collect and analyse data from clinicians who provided care, primigravid women who gave birth and administrators of maternity care in a private hospital. The analysis of these data aimed to provide an explanation for the results of Phase 1.

### **3.4.2 Phase 2 – Experience of Social Support Services**

Qualitative research provided the most efficient method to seek, record, analyse and describe the diversity of responses on the complex issue of social support services (Grbich 2013). The aim of the semi-structured interviews was to obtain data with depth and richness of information (Minichiello et al. 2004; Sandelowski 2009) through focus group interviews and individual interviews. The subsequent interpretive nature of this research method prioritises both the human inter-subjectivity between the participants, and the ability of the researcher to be conversant with the participant's perspectives and allow new information to be generated (Jayasekara 2012). Data collected through interviews and focus groups engaged key stakeholders: midwives, nurses, obstetricians, paediatricians, primigravid women and maternity service administrators at two large private hospitals. Recruitment from more than one site increased data diversity and richness, indicated by the development of cross-organisational themes.

## **3.5 Data Collection**

### **3.5.1 Participants**

A purposive recruitment strategy was used to ensure a robust selection of each participant type; being clinicians, new mothers and administrators. All participants were able to answer interview questions in the English language. Clinicians were included if they had any experience in caring for women who have given birth in a private hospital. Women were included if they had given birth to their first child in a private hospital in the four-to-six months prior to interview and excluded if they had experienced any serious disease or medical problem or in the event of infant death during the perinatal period. Conducting interviews at this time provided the new mothers with opportunities to experience postnatal support services. This time period aimed to maximise the accuracy of women's memory of their experience of early parenting support services. Administrators were included if they had any experience of managing private hospital maternity services.

### **3.5.2 Recruitment**

Recruitment of participants at two private hospitals was planned following consultation with hospital maternity service administrators, who then provided advice and assistance on recruitment strategies. The recruitment aim was to include participants who had experience of social support services (Doody, Slevin & Taggart 2013a; Redmond & Curtis 2009). Clinician and administrator participants were recruited using convenience sampling and mother participants were recruited using snowball sampling (Creswell & Plano Clarke 2007). Midwives and registered nurses were invited to participate in focus groups. Clinicians, administrators and mothers were invited to participate in semi-structured interviews. Recruitment was aimed to reduce sample bias, rather than achieving generalisability (Doody, Slevin & Taggart 2013a).

At both hospitals the administrators distributed an announcement email that informed the clinicians of the study. Additionally, posters were placed in clinician common areas within the hospital to increase awareness. Recruitment of midwives and nurses included distribution of invitations to attend an in-service education session on *Transition to Parenthood – The Role of the Midwife* which provided a theoretical introduction to the concept of early parenting support. A ten-minute PowerPoint presentation followed by 20 minutes of discussion was provided at each hospital. These sessions were attended by eight staff at one hospital and twelve at the other. The session generated interest and informed staff of the study. Following the in-service presentation, three staff at one hospital and five staff at the other provided their contact details. A full-colour, tri-fold invitation to participate in the study focus groups; *Midwives and Nurses - We Would Like to Hear Your Thoughts on Support for New Mothers*, was distributed to midwives and nurses (Invitation to Midwives and Nurses is included in Appendix 5). This invitation outlined the study aim, the ethical and hospital approval, participation requirements and contact details for the researcher. Additionally, staff contact sheets were circulated to registered nurses and midwives in maternity services. As a result of these strategies, 20 maternity staff registered their interest to participate. They were contacted to answer questions and to provide them with the details of the focus group – time and location. At this time a snowball method of recruitment was employed. The midwives and nurses were asked to inform other midwives and nurses who may be interested in participating (Cresswell 2003). Appendix 6 contains an outline of the information presented to midwives and nurses on *Transition to Parenthood – The Role of the Midwife*.

Recruitment of obstetric and paediatric visiting medical officers (VMOs) was undertaken in consultation with hospital administrators. An initial in-person visit was made to the VMO's practice manager or administrative assistant. A brief explanation of the study and a full-colour, tri-fold invitation to participate *Obstetricians and Paediatricians - We Would Like to Hear Your Thoughts on Support for New Mothers* (Appendix 7) were provided. A follow-up visit or telephone call was made to ascertain VMO interest and to schedule individual

interviews, at a time convenient to the VMO. At the end of the interview a snowball recruitment strategy was employed as the VMOs were requested to inform other VMOs about the study.

To provide maximum data diversity and encourage data saturation, 20 women were recruited. The women had all given birth to their first baby, in a private hospital, in the prior four to six months, providing homogeneity of the participants. This homogeneity as well as limiting the number of questions asked in the interview increased the likelihood of data saturation on specific themes.

Recruitment of new mothers involved distribution of a full-colour, tri-fold invitation *Study on Support for New Mothers* (provided in Appendix 8) through maternity staff and VMOs. Approval was obtained from maternity services administrators and invitations were distributed to women during hospital prenatal classes, hospital tours and parenting clinics. Clinician participants were requested to assist with recruitment of new mothers.

Recruitment of administrators was undertaken early in the study as they provided assistance and advice throughout and were keen to receive and comment on the findings. However, the interviews were not conducted until Phase 2 – Stage 3 of the study.

Field notes were made to document the success of recruitment strategies. A summary of the recruitment strategy for each participant type is outlined in Table 1 - Summary of Recruitment Strategies.

Table 1 - Summary of Recruitment Strategies

Participant Type	Recruitment Strategies	(Recruited) Participated
Midwives and Nurses	Announcement email Posters in common areas In-service presentation invitation In-service presentation Distribution of invitation brochure Request to extend invitation to peers (snowball) Distribution of sign-up sheet Follow-up telephone call	(20) 14
Obstetricians and Paediatricians	Announcement email Posters in common areas In-person visit to practice Distribution of invitation brochure In-person or telephone contact(s) Additional participants recommendation (snowball)	(9) 9
Primigravid women who gave birth in a private hospital	Snowball recruitment through paediatricians, obstetricians, midwives and nurses Distribution of invitation brochure through prenatal and parenting classes and appointments In person recruitment at prenatal classes In person recruitment at parenting clinics	(20) 8
Hospital Maternity Administrators	In-person appointment	(4) 3

Immediately prior to the interview or focus group each participant was provided with a consent form and a participant information sheet (PIS). These documents

outlined the purpose of the study, the time commitment required, and an explanation of the information requested are included in Appendix 9 – Participant Information Sheet.

### **3.5.3 Recruitment Results**

The recruitment target for each group of participants aimed to provide diversity of data on the specific issue of support services in order to ensure that data saturation was reached, as well as recruiting a sufficient number of participants for unexpected eventualities, such as health issues or relocation. Recruitment of 11 midwives and three nurses, six obstetricians, three paediatricians, 20 new mothers and four administrators proved more than ample to achieve the research objectives and data saturation.

### **3.5.4 Non-Participation**

Participants were informed prior to the interview that if after the collection of the data they would prefer that their interview transcript was not included, their data would be removed from the study. Importantly, participants were reassured that their confidentiality would be preserved, and their withdrawal would not impact the care they would receive or their employment. None of the participants requested non-participation.

### **3.5.5 Study Setting**

The data were gathered from maternity service users and providers at two private hospitals in metropolitan NSW, Australia. Interviews were conducted at a time and place convenient to the participants. For instance, obstetricians and paediatricians were interviewed in their office. Accordingly, new mothers were interviewed at their home or in an office provided by the hospital. The women were encouraged to have their baby present and reassured of their need to prioritise the care of their baby and when this occurred, the interview was halted

and then recommenced when convenient. Focus groups were held within maternity services at each hospital to minimise inconvenience to the clinicians and administrators who participated during their work hours. These focus groups were scheduled at a time suggested by the administrator that would minimise interruption to workflow.

### **3.5.6 Interviews and Focus Groups**

Semi-structured interviews were undertaken to obtain an understanding of the experience of both users and providers of social support services for new mothers. The semi-structured interview format disclosed diversity in the meaning of these services to the stakeholders as well as explaining how their experience related to both the quantitative analysis and to the current evidence. In my role as the I conducted all of the interviews; introduced myself as both a midwife and a child and family health (community) nurse, then paid particular attention to create a non-judgemental atmosphere.

For Phase 2 - Stage 1 the clinicians' experiences of early parenting support services were gathered – doctors' views were obtained through an individual interview and midwives' and nurses' views were obtained using a focus group. Obstetricians and paediatricians were invited to participate in semi-structured interviews of 15-to-20 minutes. The brief time commitment for these interviews encouraged inclusion and enabled representation from a variety of participants, thus the diversity of these data was ensured (Grbich 2013b).

Also for Stage 1 the midwives and perinatal care nurses were invited to participate in focus groups with the aim of creating a discussion on social support services, providing further depth to the data (Doody, Slevin & Taggart 2013b; Redmond & Curtis 2009). The focus group interviews were conducted with hospital midwives and nurses that work in maternity care to create an environment that brought together a variety of perspectives (Jayasekara 2012;

Redmond & Curtis 2009). To minimise inconvenience to the midwives and nurses the focus groups were undertaken in staff common areas within the maternity services area.

In the focus groups, interaction generated discussion among participants that increased the depth of the enquiry and revealed perspectives of social support services that may have been less accessible through an individual interview (Doody, Slevin & Taggart 2013a). A benefit of using a group discussion format included that participants' views, understandings and beliefs were shared and in some instances, changed during the course of the focus groups (Jayasekara 2012). The participants were encouraged to interact with each other to gain information specific to the support services of each hospital (Doody, Slevin & Taggart 2013a). Focus group questions are listed in Appendix 10. Findings from the integrative review of early parenting support services and from the results of the quantitative data analysis on risk of postnatal mental disorder guided the development of the semi-structured questions.

Pilot interviews were undertaken to determine if the interview procedures and the schedule of questions would capture data on maternal self-efficacy in early parenting support services. The obstetrician and the paediatrician interview questions were each tested on an obstetrician and a paediatrician. The midwives and nurses focus group questions were tested on a group of four midwives and nurses. The interview questions to be used in the interviews for the women were tested on two new mothers. The executive summary and the administrator interview questions were tested on two administrators. The notes and the responses from each of these pilot interviews were used to refine the vocabulary, the content and the order of the interview questions. The data collected during this question development process were not included in the study. The interview questions that were used for clinician interviews are listed in Appendix 11.

Phase 2 - Stage 2 interviews were conducted at the location that the new mother felt was most comfortable for her and her baby. Six new mothers invited me to their home, the hospital provided a quiet location for one new mother and one met me at a café that was local to her home. A study invitation was provided for each new mother with a number to call if they experienced any distress (Appendix 8). To collect information from first-time mothers on their experience interview questions were developed from themes and subthemes in the social support literature and from the Phase 1 findings. Additionally, pilot interviews were undertaken with three new mothers not included in the study. The aim of analysing data from obstetricians, paediatricians, midwives and nurses prior to developing interview questions for women and of undertaking pilot interviews was to develop the most efficient questions that minimise inconvenience to participants and maximise diversity of the data. Interview questions are listed in Appendix 12.

Phase 2 – Stage 3 of the study provided an interpretation of maternity service administrator experience of support services for primigravid women through semi-structured interviews of 20-to-30 minutes. Phase 2 – Stage 3 interviews were conducted in the offices of the three maternity service administrators. Two days before each interview the participant received an executive summary of the results and findings of the study (Appendix 13). This summary and the findings informed the development of semi-structured interview questions. With the aim of developing the most effective questions, pilot interviews were undertaken with two healthcare administrators who were not participating in the study. Interview questions are listed in Appendix 14.

In Phase 2, demographic information was collected from each participant to provide significance to the data. The demographic data for clinicians and administrators included their highest qualification, the number of years as a clinician and the number of years that they had worked at the hospital. The demographic data for the first-time mothers included their professional background as well as the age and sex of the baby.

Field notes were made during the interviews to record when body language, such as pointing or head nodding, was used by the participant and immediately following each interview to guide analysis. The field notes provided context or clarity of the data, highlighted unexpected events, enabled interpretation of participant behaviour and assisted with awareness of themes for coding (Grbich 2013; Mulhall 2003). Although the field notes are not included in this thesis, where they were used to aid the analysis or understanding of the data is noted in parentheses in the findings chapters.

Interview recordings were analysed following each interview in order to determine when no new information was recurring and provide earliest indication of theoretical saturation (Dawson 2009; Grbich 2013; Silverman 2010). The data saturation principle meant that data were gathered and analysed until no further themes emerged from the interview process. For this study, ongoing analysis was undertaken to determine the earliest instance of data saturation after ensuring that all attempts were made to look for the most diverse data (Dawson 2009). All interview data were transcribed by a university approved transcription service that specialised in NVivo transcription preparation. Transcriptions were checked for accuracy then imported into NVivo 11.0 qualitative analytical software.

While the risk to participants remained minimal, a distress protocol was developed in consultation with hospital administration to ensure the safety of all participants. The Employee Assistance Programs at each hospital were available for staff and access to allied health clinicians was provided to support the new mothers and the doctors. As the researcher, my safety risk was minimised through communication of the interview schedule and text message following interview, to my primary supervisor, to confirm researcher safety. I have had many years of experience conducting both individual and group interviews. Academic supervisors provided me with debriefing and monitored progress at all stages of the project.

### **3.6 Data Analysis**

The data analysis identified and interpreted clues in an efficient manner that provided a description of support services that can be used for practical purposes (Minichiello et al. 2004). The focus was maintained on what the data were saying, not on preconceived notions and that the data reflected the diversity, difference and uniqueness of the clinicians', women's and administrators' experiences (Minichiello et al. 2004). The diversity and depth of data provided a detailed description of the women's, clinicians', and administrators' experience of support services for new mothers', as well as suggestions, recommendations or plans for the provision of support services in the future. Qualitative data analysis was organised using a coding framework and cross tabulation matrices developed in NVivo 11.0 qualitative data software. Based on the proven link between social support and self-efficacy, a two-step analysis was undertaken – first thematic analysis and then template analysis.

#### **3.6.1 Step 1 – Thematic Analysis**

The first step was a thematic analysis, using inductive reasoning to determine support service themes for each participant type. I played an active role in selecting and defining themes on the experiences, meanings and reality of social support services (Hsieh & Shannon 2005). This analysis was undertaken in four interactive ways: 1) data familiarisation, 2) coding, 3) indexing, and 4) charting (Greenwood & Thorogood 2009). This method offered a flexible approach to develop themes that captured the important relationship between the data and the study aim (Hsieh & Shannon 2005).

To familiarise the transcriptions were read three or four times, in conjunction with listening to audio recordings and reviewing field notes. The transcriptions were then coded manually, and this initial coding was reviewed by academic supervisors to assist in the development of emergent themes and subthemes. The transcriptions were then imported into NVivo data management software

and a coding index developed to ensure that codes and themes were accurately represented. Comprehensive operational definitions were developed to ensure that all codes were understandable to others and that themes were representative of the data. The index was reviewed and refined by the academic supervisors to ensure coding credibility and authenticity (Shenton 2004). The coding procedure is outlined in Table 2 and Appendix 15 provides the code index. The coded data were then examined to determine patterns and themes.

Table 2 - Coding Procedure for thematic analysis of social support services (Hsieh & Shannon 2005)

1. Codes were defined in NVivo using specific, detailed operational definitions, in a way that is understandable to others.
2. The list of codes was reviewed to ensure:
  - Comprehensive
  - All possibilities covered
  - No new themes apparent
  - Mutually exclusive
  - Overlap / combination of broad themes changed to smaller categories
  - Data were coded to more than one theme
  - Non-instances / absence / non-occurrence included
3. The list of codes was reviewed to ensure that themes were mutually exclusive and that any overlap or combination of broad themes was broken down into smaller categories and that no data were coded to more than one theme.
4. Notation of theme non-instances, absences, or non-occurrences.
5. Following review of all codes a theme hierarchy was developed using major themes and subthemes.

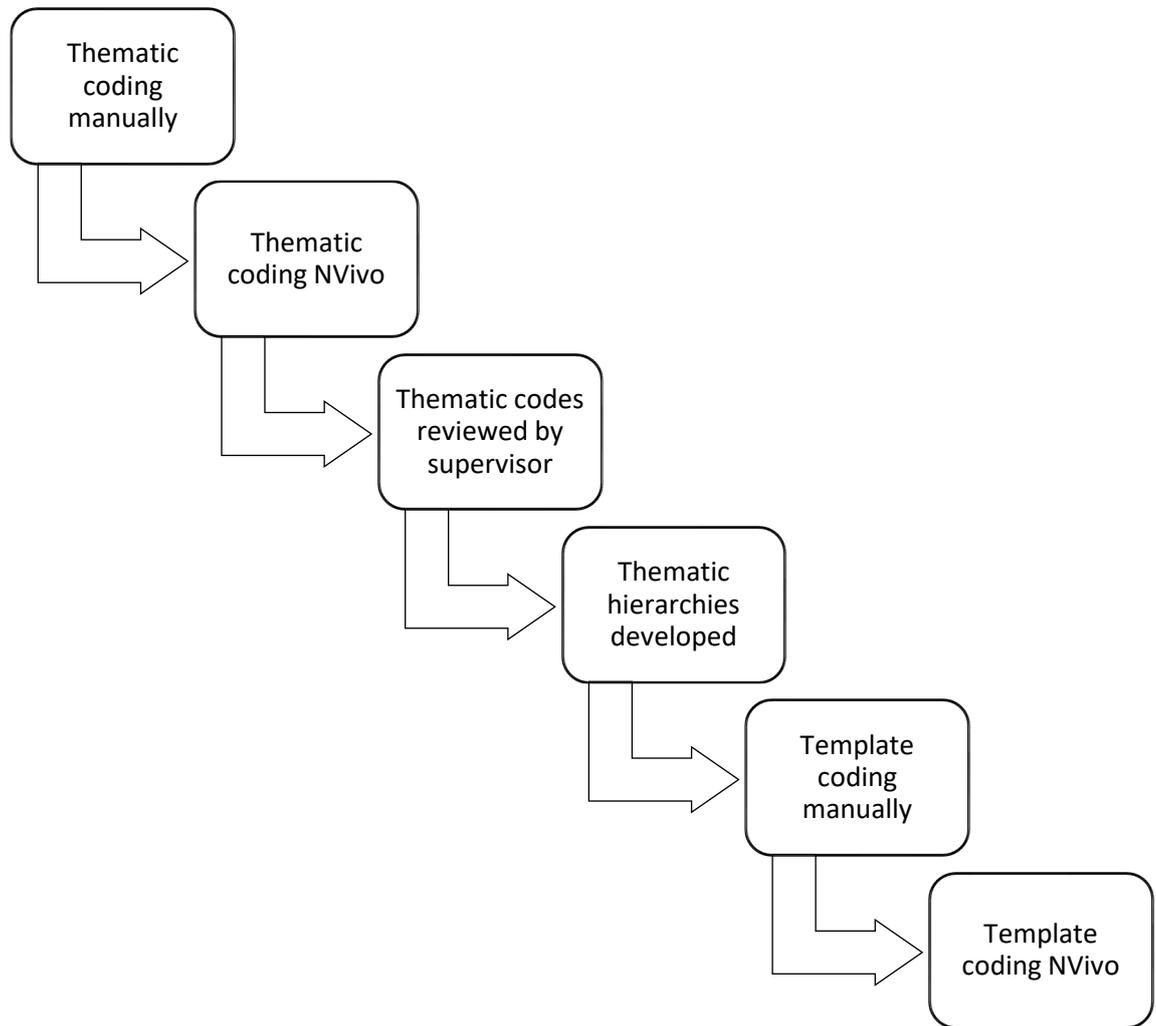
### **3.6.2 Step 2 – Template Analysis**

Step 2 was a template analysis of the new ‘social support services’ data set - extrapolated from both the clinicians’ data and the women’s data. This determined self-efficacy themes in a top down, or deductive way (Elo & Kyngas 2008; Holloway & Wheeler 2010; Streubert & Carpenter 2011). This deductive approach was used to develop the premise that for these women maternal self-efficacy may be unsupported or undermined by the support services. Based on self-efficacy theory, an a-priory template was developed to test this premise and interpret specific examples of maternal self-efficacy in order to explore the general concept of maternal self-efficacy in support

services. The a-priori template provided structure for the analysis, while allowing flexibility-to enable the continued development of the template as the analysis progressed (King 2012). This template analysis method has been used in other nursing studies (Elo & Kyngas 2008; Holloway & Wheeler 2010; Streubert & Carpenter 2011), predominately in mental health and public health nursing (Elo & Kyngas 2008; Sims & Fowler 2018). Template analysis acknowledges that the researcher's perspective is inevitable, as the analysis is influenced by the inability of the researcher to stand outside the social world (King 2012). Figure 7 outlines the analysis procedure.

Template analysis of the new data set was undertaken to determine themes of self-efficacy using an a-priori template developed from theoretical understandings of Bandura's seminal work on self-efficacy (Bandura 1993). ; Although there are a number of ways to consider self-efficacy this study used the characteristics of individuals with high self-efficacy and characteristics of individuals with low self-efficacy, identified by Bandura (1993), to develop ten determinants of self-efficacy. These determinants of self-efficacy provide a practical coding framework to best understand early parenting support service experiences using an a-priori template analysis. The self-efficacy codes were defined by comprehensive operational definitions to ensure that they were understandable to others. The template of maternal self-efficacy codes and definitions are described in Box 6.

Figure 7 - Analysis Procedure



Box 6 - Maternal Self-Efficacy Codes

	<b>Code</b>	<b>Definition of Code</b>
1	Supporting ability	Helping the woman to attract support from others which will reinforce her ability to parent
2	Being optimistic	Supporting the woman to feel hopeful and confident about parenting
3	Achieving own goals	Providing support for the woman to set and achieve her own goals in regard to parenting
4	Viewing difficulties as challenges	Helping the woman to reframe parenting difficulties as challenges to be mastered
5	Sustaining commitment	Supporting the woman to hold strong commitment on parenting related matters
6	Concentrating on the task	Supporting the woman to be focused on the parenting task (rather than on themselves)
7	Minimising self-doubt	Providing assistance to the woman to turn outwards, rather than to turn inwards to self-doubt, on parenting issues
8	Looking past obstacles	Help the woman to look past obstacles and minimise dwelling on failure
9	Holding faith	Provide assistance regarding parenting issues so that the woman can embrace conviction and not lose faith
10	Blaming remedial factors	Support the woman to determine the remedial factors responsible for parenting failures not her own inadequacies

### **3.6.3 Summary of Analysis**

This two-step analysis of thematic then template analysis allowed the data to be organised in a way that illustrated patterns of self-efficacy within social support themes. During the analysis a focus was maintained on the study aim of exploring support services while being as unbiased as possible in the collection, analysis and presentation of findings. It was anticipated that the most important themes would run through the analysis. Extended periods of data immersion were undertaken at the end of the data collection for each phase to ensure coding, mixing and reporting of data remained within the context of the study as a whole (Streubert & Carpenter 2011). The final analysis included integration of results and findings from all stages, using matrices to compare, contrast and identify themes and ensure explicit confirmation and validation of multiple sources. This facilitated illumination of the important themes; that is the patterns that run through the integrative reviews, the quantitative data and the qualitative data, important to the description of support services for women who gave birth in a private hospital.

The exploration and interpretation of findings from each stage are presented as three self-efficacy themes in experiences of support service for women who gave birth in a private hospital. These three themes are: 1) psychosocial assessment as part of routine care, 2) infant feeding support services and 3) parenting self-doubt and reassurance through online support. Communication between the researcher and academic supervisors determined which narratives best exemplified themes and subthemes. These narratives are indented, interpretations provided in parentheses, where they were deemed essential and analytical comments provided in chapters five, six, seven and eight.

## **3.7 Research Trustworthiness**

Research trustworthiness has provided acknowledgement that the findings are worthy of attention and the analysis process has been reported accurately at every stage: preparation, organisation and reporting (Elo et al. 2014; Shenton

2004). Trustworthiness in this study was determined as the degree that this study accurately reflected the specific concept of social support services for first time mothers who gave birth in a private hospital (Jayasekara 2012). The factual accuracy of the interview and focus group data provided descriptive validity and the inferences from the data were used to provide concept validity (Jayasekara 2012). For this study all four characteristics of trustworthiness were considered: confirmability, credibility, dependability and transferability.

### **3.7.1 Confirmability**

All qualitative research has the potential to be biased by the experiences of the researcher. The researcher's admission to any predisposition that underpins the research methods used, or research decisions made, provided reassurance that the findings emerged from the data, not from the researcher's disposition (Shenton 2004). The researcher acknowledged experience in providing support services for new mothers and provision of supervision at all stages of design, data collection and analysis were undertaken in collaboration with academic supervisors.

The use of a reflective journal assisted me as the researcher to ensure that findings were from the data. Throughout the course of the study academic supervisor meetings provided a 'sounding board' to test developing ideas of my vision, identified unsound research practices and enabled improved or altered practices to be developed (Shenton 2004). The supervision meetings ensured sound methodology and accuracy of coding and supported a developing understanding of maternal self-efficacy and perinatal mental disorder. This aspect of confirmability enabled the negotiation of power and the development of trust in the relationship between the researcher and the participants. These actions affected what data were obtained and what was given greatest credence in the analysis (Shenton 2004). Deep reflection of the knowledge produced within the parameters of the study, acknowledges that a researcher needs to be mindful of fostering dominance, having the potential to privilege

their own ideals within the analysis. Accordingly, my efforts I believe have supported an honest and accurate analysis to be undertaken resulting in an ethical account of the data.

### **3.7.2 Credibility**

Credibility, or the presentation of a true picture of the findings, has been demonstrated through adoption of well-established research methods (Elo et al. 2014; Shenton 2004). Template analysis is well documented in the nursing literature as a credible method of analysing qualitative health care data, although being a deductive analysis in many cases the initial template does not fully capture the depth and scope of the collected data (Elo et al. 2014; Elo & Kyngas 2008). The accurate description of participants has also provided credibility (Elo et al. 2014). The clinicians and administrators are described by gender, age, and experience in the clinical specialty as well as experience in the organisation. New mothers are described by gender, age, age of baby, mode of birth and type of complication (if occurred). As I have worked as a clinician at both hospitals, the familiarity with the organisational culture created an environment of confidence in my credibility as the researcher (Shenton 2004). A reflexive narrative is provided in 3.7.4 of this chapter.

### **3.7.3 Dependability**

A third focus of trustworthiness; dependability, determines if future researchers would be able to repeat the work (Shenton 2004). The extent that the findings of this study are repeatable in different circumstances, is reflected in the detailed description of methodology (Jayasekara 2012). The use of interviews and focus groups combined with template analysis would enable future researchers to repeat the study in other settings and at future times. Reliability of focus group data were achieved through the capacity of group members to monitor authenticity, including the documentation of marginalised voices, which reinforced the trustworthiness (Jayasekara 2012). Reliability was also achieved through equivalence; the researcher assumed responsibility as both moderator

and coder to ensure consistency or equivalence. Dependability requires stability of data under different conditions and over time (Elo et al. 2014). It is understood that these findings provide a description that is frozen in the time period of this study and any change to the perinatal policy, services, provider training or education may change the findings of future studies.

### **3.7.4 Transferability**

Transferability or potential for extrapolation is demonstrated in sufficient detail of the context of fieldwork to enable the reader to decide if the study environment is similar to one that the reader is familiar with, so they can relate their findings (Elo et al. 2014). This may include the number of participants, type of people who contributed to the data, the data collection methods, the number of organisations taking part and where they are based (Elo et al. 2014). For this study clinicians, first-time mothers and hospital administrators were interviewed each regarding their experience of social support services for new mothers who give birth at a private hospital. Readers who are familiar with a similar service may determine that these findings provide a baseline understanding which can be compared to similar studies of social support services.

Analysis and re-analysis of the data, from general to specific, developed familiarity (Elo et al. 2014). The use of template analysis for data gathered from three different types of participant; clinicians, new mothers and hospital administrators, has provided a detailed and diverse description of social support services. Use of similar methods and similar codes to those that have been used in other studies of social support services will allow the findings of this study to be compared to other social support studies. Additionally, the provision of field notes increases replicability and therefore reliability (Jayasekara 2012).

### **3.7.5 Personal Reflection**

I commenced this study with 35 years of experience as a registered nurse, midwife, and child and family health nurse. Both negative and positive experiences that have come from personal and professional experiences have informed my understanding of the issues such as: being a woman, a feminist, a midwife, a mother of three children, and a person who has experienced a perinatal mental disorder. As a consequence, these experiences have shaped my preconceptions about perinatal health, social support and maternal self-efficacy. These experiences and assumptions provide fundamental knowledge that has influenced the study and informed how the data were analysed. The issue was not whether to use this knowledge, relegating it as being purely subjective, but how to use it most effectively and be able to enhance my analysis of the data (Minichiello et al. 2004). Furthermore, giving consideration to my work as a midwife at both research sites and the parameters of the topic being investigated, I can be defined as an 'insider researcher'. The main challenge of being an insider was maintaining objectivity with such a high level of subjective involvement. However, having gained many years of experience in reflective clinical practice, this skill was used throughout the research project to minimise subjective bias. The advantages of being an insider researcher was that my professional experience providing psychosocial support for women who give birth in a private hospital prompted me to undertake this support services study and high levels of trust and rapport were exhibited by study participants with whom I had already established a relationship during the course of clinical practice, possibly improving both recruitment and disclosure as a result.

### **3.8 Ethical Considerations**

Approval for the Phase 1, quantitative phase of this study was received from the NSW Population and Health Services Research Ethics Committee (AU RED Reference: HREC/11/CIPHS/33) on 13 May 2016 and ratified by the Human Research Ethics Committee of the University of Technology Sydney, Australia (ETH16-0839) on 3 April 2017. Approval for the mixed methods design was

received from the Human Research Ethics Committee of the University of Technology Sydney, Australia (ETH16-0839) on 3 April 2017 and also from both hospital ethics committees. (Appendix 16 contains the ethics committee approval documents).

### **3.8.1 Data Management and Storage**

Following the UTS data management plan, digital audio recordings were reviewed for initial impressions and to obtain a broad sense of meaning. The audio recordings were then transcribed verbatim by a professional transcription service then checked by me for accuracy.

### **3.8.2 Safety and Security**

Each participant's interview was de-identified prior to the transcribing process to ensure anonymity. Only myself as the researcher and academic supervisors had access to the original data. Original sourced data and any data that contributed to the study will be retained on a password protected computer within a home office until 2026 (Australian National Health and Medical Research Council 2014). As participants or organisations may be able to be identified despite amalgamation and de-identification, data will not to be provided to the University of Technology Sydney for use by others.

As maternity units have small numbers of staff, there was some risk that administrators may have recognised staff comments. To minimise this risk, all data, including field notes and audio recordings, were de-identified and aggregated. No other person had access to the raw data. The time delay from data collection to publication of results will also assist in ensuring confidentiality.

This method chapter has detailed the exact steps that were followed in the Support Services Study. This may allow replication of the study and provide the

reader with confidence that the explanatory sequential mixed-methods analysis was the most appropriate methods to explore early parenting support services for women who gave birth in a private hospital. The following chapters will present the results and findings of this study.

## **Chapter 4 Results of Phase 1 – Risk of Perinatal Mental Disorder for Women who Gave Birth in a Private Hospital**

Phase 1 of the study is provided within Chapter 4. The foundation and justification for this study is in the form of a submitted journal article. The article compares the risk of mental disorder between women who gave birth in a private hospital and a public hospital. The hypothesis was that women who gave birth in a private hospital had greater risk of a mental disorder in the postnatal year than women who gave birth in a public hospital. The result of the analysis determined that there was an increased likelihood of admission for a mental disorder in the postpartum year for women who gave birth in a private hospital (rate of 2.54 percent) compared to women who gave birth in a public hospital (rate of 1.68 percent).

The analysis and results were presented in a poster at the Australasian Marce Society Biannual Conference in October 2017 (Appendix 17). The results were also submitted for publication to the International Journal of Mental Health Nursing:

Sims D, Xu F, Fowler C, Catling C. Hospital Admission for Postnatal Mental Disorders - Comparing Private and Public Hospital Birth in New South Wales, Australia, International Journal of Mental Health Nursing [submitted September 2019]

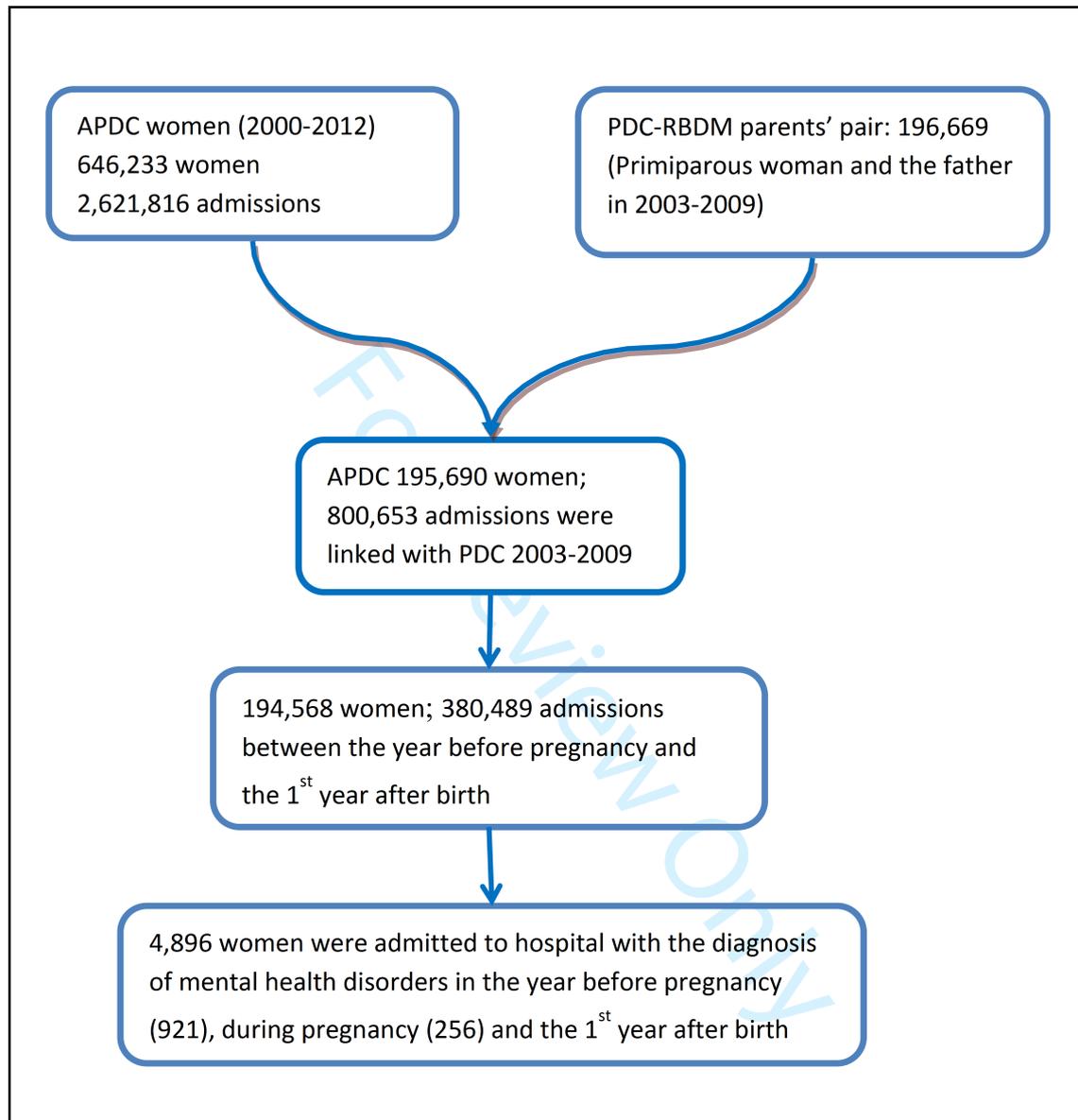
DS and FX planned the construction of the manuscript and wrote the main manuscript text. FX guided statistical analysis and prepared Figures 1-3 with assistance from DS. All authors discussed the concept of the paper, reviewed the manuscript, provided ongoing guidance and editing.



**Hospital Admission for Postnatal Mental Disorders -  
Comparing Private and Public Hospital Birth in New South  
Wales, Australia**

Journal:	<i>International Journal of Mental Health Nursing</i>
Manuscript ID	Draft
Manuscript Type:	Original Article
Keywords:	postpartum, mental disorder, hospital admission, private hospital
Abstract:	<p>This research aimed to compare hospital admission for mental disorders during the first year after birth, between women who gave birth in private and in public hospitals.</p> <p>This population-based cohort study used linked data from the NSW Perinatal Data Collection, NSW Registry of Births, Deaths, and Marriages, and NSW Admitted Patients Data Collection (2003 to 2009).</p> <p>In the first year after birth, primigravid women who gave birth in private hospitals were more likely to be admitted to hospital with the diagnosis of mental disorders (rate = 2.54%, 95% CI = 2.40-2.68%) compared with those who gave birth in public hospitals (rate = 1.68 %, 95% CI = 1.61 – 1.75 %).</p> <p>In order to help reduce postnatal mental disorders for women who give birth in a private hospital, support services need to be provided. The results of this study will guide further research on early parenting support and may contribute to an integrated model of support services to improve outcomes for women, their babies and their families.</p>

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**Figure 1: The data linkage study population**

**Table 1: Characteristics of primigravid women who gave birth in NSW, Australia 2003–2009**

variable	Value	n	Women who gave birth in a private hospital		Women who gave birth in a public hospital	
			Women	%	Women	%
Maternal age*	<20	13994	187	0.39	13807	9.27
	20–24	35951	2063	4.33	33888	22.76
	25–29	59643	13971	29.35	45672	30.68
	30–34	57379	20487	43.03	36892	24.78
	35–39	24135	8941	18.78	15194	10.21
	40–44	5059	1851	3.89	3208	2.15
	45+	291	109	0.23	182	0.12
	Missing	22	0	0	22	0.01
	Total	196474	47609	100	148865	100
Women's country of birth*	Australia	132950	34907	73.32	98043	65.86
	Other countries	63524	12702	26.68	50822	34.14
	Total	196474	47609	100	148865	100
Remoteness*	Major cities	137173	38581	81.04	98592	66.23
	Inner regional	42987	8321	17.48	34666	23.29
	Outer region and remote	13779	648	1.36	13131	8.82
	Missing	2535	59	0.12	2476	1.66

	Total	196474	47609	100	148865	100
Smoking during pregnancy*	No	174918	46683	98.05	128235	86.14
	Yes	20945	900	1.89	20045	13.47
	Missing	611	26	0.05	585	0.39
	Total	196474	47609	100	148865	100
Index of Relative SE Disadvantage Quintile*	Least disadvantaged	46053	20736	43.55	25317	17.01
	2	40625	10978	23.06	29647	19.92
	3	36720	7639	16.05	29081	19.54
	4	33385	4510	9.47	28875	19.4
	Most disadvantaged	37156	3687	7.74	33469	22.48
	Missing	2535	59	0.12	2476	1.66
	Total	196474	47609	100	148865	100
Gestational age*	<28w	1011	56	0.12	955	0.64
	28–31w	1453	32	0.07	1421	0.95
	32–36w	11537	2499	5.25	9038	6.07
	37–41w	178416	44660	93.81	133756	89.85
	42w+	4039	356	0.75	3683	2.47
	Missing	18	6	0.01	12	0.01
	Total	196474	47609	100	148865	100
Mode of birth*	Vaginal	133886	28062	58.94	105824	71.09
	Caesarean section	62483	19484	40.93	42999	28.88

	Missing	105	63	0.13	42	0.03
	Total	196474	47609	100	148865	100
Maternal	No	195434	47380	99.52	148054	99.46
diabetes	Yes	1040	229	0.48	811	0.54
mellitus	Total	196474	47609	100	148865	100
Gestational	No	187393	45922	96.46	141471	95.03
diabetes*	Yes	9081	1687	3.54	7394	4.97
	Total	196474	47609	100	148865	100
Maternal	No	194638	47126	98.99	147512	99.09
hypertension*	Yes	1836	483	1.01	1353	0.91
	Total	196474	47609	100	148865	100
Place of	1.00 Hospital	191946	47566	99.91	144380	96.99
birth*	2.00 Birth	4271	8	0.02	4263	2.86
	Centre					
	3.00 others	236	17	0.04	219	0.15
	Missing	21	18	0.04	3	0
	Total	196474	47609	100	148865	100
Birth year*	2003	27108	6542	13.74	20566	13.82
	2004	26597	6256	13.14	20341	13.66
	2005	27224	6603	13.87	20621	13.85
	2006	27610	6784	14.25	20826	13.99
	2007	28999	7025	14.76	21974	14.76
	2008	28994	6970	14.64	22024	14.79
	2009	29942	7429	15.6	22513	15.12

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Total	196474	47609	100	148865	100
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\*(P<0.05).

For Review Only

**Table 2: Hospital type for birth and hospital admissions for postnatal mental disorders in NSW, Australia 2003–2009**

Factor	Value	N	Rate (%)	95%CI	
Hospital type for giving birth*	Private	47609	2.54	2.40	2.68
	Public	148865	1.68	1.61	1.75
	Missing	195	2.05	0.06	4.04
	Total	196669	1.89	1.83	1.95

\*Statistically significantly different ( $P < 0.05$ ).

**Table 3: OR of hospital admission for postnatal mental health disorder by hospital type for giving birth in NSW, Australia 2003–2009**

Factor	Values	Women	Crude OR	95%CI	Adjusted OR <sup>a</sup>	95%CI
Hospital type for giving birth	Private	47609	1.52	1.42 1.63	1.13	1.04 1.22
	Public	148865	1		1	
	Total	196474				

<sup>a</sup>Adjusted for maternal age, maternal country of birth, maternal diabetes mellitus and hypertension, gestational diabetes, smoking status during pregnancy, remoteness of living area, method of birth, gestational age, place of birth, year of birth and the Index of Relative Socio-economic Disadvantage Quintile.

## Abstract

This research aimed to compare hospital admission for mental disorders during the first year after birth, between women who gave birth in private and in public hospitals.

This population-based cohort study used linked data from the NSW Perinatal Data Collection, NSW Registry of Births, Deaths and Marriages, and NSW Admitted Patients Data Collection (2003 to 2009).

In the first year after birth, primigravid women who gave birth in private hospitals were more likely to be admitted to hospital with the diagnosis of mental disorders (rate = 2.54%, 95% CI = 2.40-2.68%) compared with those who gave birth in public hospitals (rate = 1.68 %, 95% CI = 1.61 – 1.75 %).

In order to help reduce postnatal mental disorders for women who give birth in private hospitals support services need to be provided. The results of this study will guide further research on early parenting support, and may contribute to an integrated model of support services to improve outcomes for women, their babies and their families.

**KEY WORDS:** postpartum; mental disorder; hospital admission; private; hospital;

**List of Abbreviations**

APDC	Admitted Patients Data Collection
CFH	child and family health
CHeReL	Centre for Health Record Linkage
CI	Confidence Interval
EPS	early parenting support
NHMRC	The National Health and Medical Research Council
NSW	New South Wales
PDC	NSW Perinatal Data Collection
RBDM	NSW Registry of Births, Deaths and Marriages

## 1. Introduction

Perinatal mental disorders are complicated by the effects of symptomatology on the woman as well as on her ability to parent (WHO, 2009). The two most commonly diagnosed mental disorders in the perinatal period are anxiety and depression, which affect one-in-six women (M-P. Austin & Highet, 2017). In the immediate postnatal period hospitalisation for mental disorder was increased significantly (F Xu, 2014). The hospital length of stay for mental disorder was significantly longer than for general admissions (F Xu, 2014). For women who accessed early parenting residential services, 63% of the women met diagnostic criteria for commonly occurring perinatal mental disorders (Corr, Rowe, & Fisher, 2015b). The disruption caused by perinatal mental health disorders can have implications for infant health.

Perinatal mental disorders can detrimentally impact a child's cognitive, emotional and behavioural development (Talge, Neal, & Glover, 2007). For women with untreated depression during the pre-natal period there is a significant increase in the risk of preterm birth or low birth weight (Jarde et al., 2016). Postnatal depression has been strongly linked with infant-maternal attachment disorders, interaction deficits and long-term impairment of the mother-infant bond (McMahon, Barnett, & Kowalenko, 2006). Infant cognitive, behavioural, psychomotor and language development are all affected when maternal depression is severe or chronic (Cornish et al., 2005). Additionally, the long-term impact of a woman having a postnatal mental disorder can increase the risk of a mental disorder occurring in their adolescent children (Halligan, Murray, Martins, & Cooper, 2007). Hence, it is important to promote interventions that may have a positive affect on mental health in the perinatal period.

Good mental health has been identified in the literature as an outcome of early parenting support provided through the universal community nursing services (M-P. Austin & Priest,

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2  
3 2005; Christl et al., 2013; Corr et al., 2015b). These services can reduce the risk of mental  
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5 disorders during the perinatal period through early identification and reduction in negative  
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7 outcomes for women, their children and families (M-P. Austin, Hadzi-Pavlovic, Saint, &  
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9 Parker, 2005). The prevalence of common perinatal mental disorders, including depression,  
10  
11 general anxiety disorder and phobia, is reduced following postnatal psychoeducational  
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13 programs (Bahrami, Simbar, & Bahrami, 2013; Fisher, Rowe, Wynter, & *al.*, 2016). These  
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15 programs together with prenatal educational classes have demonstrated reduced symptoms of  
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17 anxiety in women (Bahrami et al., 2013; Fisher et al., 2016; Perez-Blasco, Viguer, &  
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19 Rodrigo, 2013). In addition, postnatal mindfulness-based interventions reduced anxiety  
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21 symptoms, stress and psychological distress (Perez-Blasco et al., 2013) and those who  
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23 accessed community nursing services have shown sustained improvements in psychological  
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25 function. Unfortunately, these services are not available or accessible for all women (Reilly et  
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27 al., 2013).

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35 In Australia, approximately 300,000 women give birth each year (Australian Bureau of  
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37 Statistics, 2016). The Australian context of perinatal care is provided through a mix of  
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39 government and private funding which varies by life-stage and geographical location.  
40  
41 Australia maternity care includes prenatal, labour, birth, and immediate postnatal care. Public  
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43 hospital maternity services are provided for approximately 60% of Australian births  
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45 (Australian Institute of Health and Welfare, 2018). Women are then routinely referred into  
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47 the government provided universal CFH services (Corr, Rowe, & Fisher, 2015a; Department  
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49 of Human Services, 2005; Schmied, Kruske, Barclay, & Fowler, 2011). Private hospital  
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51 maternity services, directed by private obstetricians, are provided for approximately 40% of  
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53 Australian births (Australian Institute of Health and Welfare, 2018). Maternity care in the  
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55 private system does not traditionally extend beyond birth and the immediate postpartum  
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3 period (Reilly et al., 2015). In NSW universal health service policy does not apply to private  
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5 hospitals(NSW Department of Health, 2009). Therefore, women who are cared for in the  
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7 private system may access less postnatal support services, which may impact their mental  
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9 health outcomes.  
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12 To date, no study has reported the risk of mental disorders in women who gave birth in a  
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14 private hospital compared to those who gave birth in a public hospital. The aim of this study  
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16 was to compare hospital admissions of women with a primary diagnosis of a mental disorder  
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18 during the first year after birth, between women who gave birth in private and public  
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20 hospitals.  
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## 28 **2. Materials and Method**

29  
30 This population-based cohort study includes all women who gave birth to their first child in  
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32 New South Wales (NSW) between 1 January 2003 and 31 December 2009. Analysis was  
33  
34 carried out using linked data from the NSW Perinatal Data Collection (PDC), NSW Registry  
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36 of Births, Deaths and Marriages (RBDM) and the NSW Admitted Patients Data Collection  
37  
38 (APDC). The study population and data linkage details are described in Figure 1. The PDC  
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40 birth records were linked with RBDM by Project Person Number (PPN). The linked PDC-  
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42 RBDM birth records between 1 January 2003 and 31 December 2009 were linked with  
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44 APDC records between 2000 and 2012. By doing this, hospital admissions were identified for  
45  
46 the year before pregnancy, during pregnancy as well as one year after birth. (The APDC  
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48 records selection and data linkage are detailed in Figure 1). Hospital admissions for mental  
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50 disorders were identified by APDC records (F. Xu, Sullivan, Binns, & Homer, 2016).  
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## 2.1 Data Sources

The PDC is a population-based surveillance system. It includes all births in NSW of 20 weeks gestation or more or of at least 400g birthweight. It includes all births in public and private hospitals, and home births. The system captures maternal characteristics, pregnancy, labour, birth, and neonatal outcomes. The RBDM is a database for birth registrations which includes age and place of residence. The APDC is routinely collected for all hospital separations. It includes all public and private hospitalisations in NSW, patient demographics, diagnoses and clinical procedure information (National Centre for Classification in Health, 1999).

## 2.2 Data linkage

The data linkage was performed by the NSW Department of Health Centre for Health Record Linkage (CHeReL). Probabilistic record linkage methods and 'ChoiceMaker' software were used for the linkage (Department of Health Centre for Health Record Linkage, 2016 [cited 2016 April 13]). Identifying information from the PDC, RBDM and APDC datasets was included in a Master Linkage Key. At the completion of the data linkage process, each record was assigned a PPN to allow records of the same individual to be linked. Based on the 1,000 randomly selected sample of records, the false positive rate of the linkage was 0.3% and false negative <0.5%.

## 2.3 Measures

The diagnoses for each admission were coded according to the Australian modification of the World Health Organization ICD-10 Classification of Diseases and Related Health Problems (ICD-10-AM) (National Centre for Classification in Health, 1999). Women with mental

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3 disorders were identified using ICD-10-AM diagnosis codes F00-99. Only the first hospital  
4 admission with a principal diagnosis of a mental disorder (between the first month of the year  
5 before pregnancy and the last month of the year after birth) was included in the analysis. The  
6 principal diagnosis refers to the diagnosis that was chiefly responsible for APDC hospital  
7 admission (F. Xu et al., 2016).  
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## 19 2.4 Statistical Analysis

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21 Descriptive statistics were used to analyse the rate of hospital admission (including the 95%  
22 confidence interval [CI]), hospital type, demographic factors, and women's characteristics.  
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24 The characteristics of women who gave birth in private and public hospitals were described  
25 and compared in Table 1. The rates of hospital admissions for mental disorders after birth  
26 were compared between private and public hospitals in Table 2. Binary logistic regression  
27 models were used to estimate the odds ratio (OR) of hospital type on hospitalisation for  
28 mental disorders after birth. First hospital admission for mental disorders (yes/no) in the first  
29 year after birth was the dependent variable. Hospital type recorded in the PDC was the  
30 independent variable (Table 3). The adjusted factors include maternal age, maternal country  
31 of birth, maternal diabetes mellitus and hypertension, gestational diabetes, smoking status  
32 during pregnancy, remoteness of living area, method of birth, gestational age, place of birth  
33 and the Index of Relative Socio-economic Disadvantage Quintile (Adhikari, 2006). The  
34 analyses were conducted using IBM SPSS (Statistical Package for Social Science) Statistics  
35 version 22 (IBM, 2015).  
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## 2.5 Ethics

This study was approved by the NSW Population and Health Services Research Ethics Committee (AU RED Reference: HREC/11/CIPHS/33) and the Human Research Ethics Committee of the University of Technology Sydney, Australia (ETH16-0839).

## 3. Results

A comparison of characteristics of women who gave birth in a private hospital and women who gave birth in a public hospital during the same period is presented in Table 1.

*[place Table 1 here]*

There were 196,474 participants in the study. During the study period, 3,715 women (1.89 per 100) were admitted to hospital with the diagnosis of mental disorders in the first year after birth. The women had no history of hospital admissions with a principal diagnosis of mental disorder during and before pregnancy.

The hospital admission rate for diagnosis of mental disorders is presented in Table 2. Women who gave birth in private hospitals (rate=2.54 %, 95%CI=2.40-2.68 %) were more likely to be admitted to hospital with the diagnosis of a mental disorder compared with the women who gave birth in public hospitals (rate=1.68 %, 95%CI=1.61-1.75 %).

*[place Table 2 here]*

The OR of hospital admissions for postnatal mental disorder in women who gave birth in private and public hospital is presented in Table 3. Women who gave birth in private hospitals were more likely to be admitted to hospital with a diagnosis of mental disorder in the first year after birth (adjusted OR=1.13, 95%CI=1.04-1.22).

*[Place Table 3 here]*

#### 4. Discussion and Conclusion

The perinatal period, from conception through to 12 months after birth, is a time of physical, emotional and social change, often occurring simultaneously (WHO, 2009). The many and varied psychological and somatic incidents of the postpartum period require personal adaptation and interpersonal reorganisation (Milgrom, Schembri, Ericksen, Ross, & Germill, 2011). Physical discomfort and pain, reduced rest and recreation, loss of employment, changes in social networks, and financial pressures may result in stressful experiences (Cox, Holden, & Henshaw, 2014). During this period, mental health and wellbeing are critical to ensure that women are equipped to manage the physical, social and emotional changes that are associated with optimal parenting and child development (M-P Austin, Hightet, & Committee, 2011).

This study highlights that women who gave birth in a private hospital were more likely to be admitted to hospital with a mental disorder in the first year after birth compared with those in a public hospital. Data from one large-scale study of women who were screened in the antenatal period for depression and psychosocial risk in an Australian private hospital setting identified that depressive symptoms in this cohort were common despite the women being mostly well-supported, socio-economically advantaged and highly educated (Kohlhoff, Hickinbotham, Knox, Roach, & Barnett, 2016). Although the majority of women in the sample stated that they were generally self-confident and had practical and emotional support, other psychosocial risk factors were common (Kohlhoff et al., 2016). Antenatally 60.3% of the women reported having experienced a significant major stressor, change or loss in the previous 12 months (Kohlhoff et al., 2016). This rate was considerably higher than the

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3 24.4% reported in an Australian public hospital cohort (Kohlhoff et al., 2016; Matthey et al.,  
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5 2004).  
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10 The increased risk for women to be admitted to hospital with a mental disorder in the  
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12 postnatal period may be associated with the fragmentation of perinatal services in private  
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14 hospitals. In the perinatal period, Australian women and their babies may access several  
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16 primary healthcare professionals; midwives, medical practitioners and CFH nurses (Myors,  
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18 Schmied, Johnson, & Cleary, 2014). Although all Australian women were entitled to  
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20 federally funded universal services, women who give birth in a private hospital may not be  
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22 offered publically funded services (M-P. Austin, 2003) and may not have access to private  
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24 services (Reilly et al., 2015). This may limit knowledge of and consequent access to  
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26 universal services (M-P. Austin, 2003; Reilly et al., 2013).  
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33 The increased risk for women to be admitted to hospital with a mental disorder in the  
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35 postnatal period may be associated with increased maternal age and risk of pregnancy-  
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37 associated psychological sequelae (O'Leary & Thorwick, 1993). A greater percentage of  
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39 women who give birth in a private hospital were aged 35 years or older, 22.9% were aged 35  
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41 years or older, compared to 12.49% in women who gave birth in a public hospital. In this  
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43 study, although age was adjusted in the logistic regression model an association between  
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45 hospital type and hospital admission for mental disorders still existed.  
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55 Evidence of perinatal mental disorder informs both public and private perinatal clinical  
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57 practice. It is crucial to ensure mandated training and competency standards crossed the  
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3 public/private divide for all perinatal care providers on the assessment of risk of perinatal  
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5 mental disorders and the impact on the woman, infant and partner.  
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10 Development of stronger links between private hospitals and community health services are  
11 indicated. A collaborative model of care between perinatal care providers in the private  
12 hospital setting (midwives and obstetricians) and primary care practitioners (community  
13 nurses and family doctors) is essential to ensure prevention, early identification, and  
14 management of existing or potential mental disorders. Providing support services to a  
15 woman has the potential to improve her physical, psychological and social outcomes as well  
16 as improve outcomes for her baby, the family and Australian society – both in the short and  
17 long term. This study has begun an exploration of the risk of perinatal mental disorders for  
18 women who gave birth in a private hospital that is part of a two-tier health service where  
19 support services are publicly funded.  
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35 There are a number of limitations to this study. Hospital admissions for perinatal mental  
36 disorders may be over-estimated if the admission was for a medical reason associated with  
37 the perinatal period. To minimize the overestimation, only those admissions with a ‘principal’  
38 diagnosis of a mental disorder were included. Future research may investigate the  
39 relationship between private health insurance and mental disorder.  
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46 Postnatal services need to be provided to women who give birth in private hospitals. The  
47 results of this study will guide further research on early parenting support, and may  
48 contribute to an integrated model of CFH services and improve outcomes for women, their  
49 babies and their families.  
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58 Relevance for Clinical Practice  
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3 The results of this study may inform policy and practice for both perinatal mental health  
4 services and private maternity care services. Results may assist in the development of  
5 integrated models of support to improve minimise the risk of mental disorder and facilitate  
6 positive outcomes for new mothers, their babies and their families.  
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### 17 **Disclosure Statement**

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19 The authors declare that they have no competing interest.  
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The main aim of this study was to examine early parenting support services for women giving birth in a private hospital and how these support services influence perinatal mental disorder. The risk of developing postnatal mental disorder for women who gave birth in a private hospital was compared to the risk for women who gave birth in a public hospital through the comparison on hospital admission in the postnatal year with a mental disorder. Chapter 4 demonstrated that the risk of hospital admission in the postnatal year with a primary diagnosis of mental disorder was significantly higher for women who gave birth in a private hospital than for women who gave birth in a public hospital (rate = 2.54%, compared with rate = 1.68 %, 95% CI = 1.61 – 1.75 %). Using hospital admission as an indication of occurrence of mental disorder this suggests an increased risk of mental disorder for women who gave birth in a private hospital. Critically the quantitative data used within this chapter has demonstrated the need for attention to be paid to the psychosocial support needs of women who gave birth within the state private hospital sector.

Other studies have already demonstrated that support services can reduce the risk of developing a mental disorder. One support service, perinatal psychosocial assessment, examines the risk of a mental disorder and enables introduction of interventions to reduce this risk and improve mental health. Chapter 5 described new mother and clinician experiences of postnatal psychosocial assessment. Through the exploration and integration of data it was determined that that women who gave birth in a private hospital were less likely to be assessed for risk of mental disorder. The manuscript in Chapter 5 presents and discusses these findings.

## **Chapter 5 Findings of Phase 2 – Perinatal Assessment of Risk of Mental Illness; Experience of First-time Mothers and Clinician, Australian Private Hospitals**

Perinatal mental disorder is recognised as having a significant impact on a woman's ability to provide sensitive, timely and appropriate mothering for her newborn infant. A major focus has been placed by Australian federal and state governments on early identification of psychosocial risk factors that may predispose women to the development of a perinatal mental disorder. The previous chapter identified the increased risk of developing a mental disorder for women who gave birth within a private hospital, compared to women who gave birth in a public hospital. This chapter provides a description of perinatal assessment of risk of mental disorder, through the exploration and interpretation of mothers' and clinicians' experiences.

The description is presented as a manuscript which was submitted to BMC Pregnancy and Birth in September 2019. The thesis theme of psychosocial assessment has four sub themes, however these are termed 'theme' for the manuscript on psychosocial assessment. The manuscript highlighted that assessment of risk was not offered to mothers who gave birth in a private hospital as part of their routine care. The manuscript also explained that where assessment of risk was undertaken it was not in the form of a comprehensive psychosocial assessment, it was either using a screening tool, the Edinburgh Postnatal Depression Scale, or as a question on emotional wellbeing that was asked during interview. Additionally, when screening was undertaken the mother may have been screened by multiple services, suggesting that care was not provided in a coordinated manner. And finally, the information demonstrated that participants had an awareness of mental health resources, suggesting that it was not lack of resources that prevented the assessment of risk. This study demonstrated that comprehensive psychosocial assessment of risk developing

a mental disorder was not provided as part of routine care for women who gave birth in two private hospitals.

These findings were submitted for publication, to the journal *BMC Pregnancy and Childbirth*, in September 2019.

Sims D, Fowler C, Catling C, Xu F, Perinatal Assessment of Risk of Mental Illness: Experience of First-time Mothers and Clinicians, Australian Private Hospitals, *BMC Pregnancy and Childbirth*, [September 2019].

DS and CF planned the construction of the manuscript and wrote the main manuscript text. All authors discussed the concept of the paper, reviewed the manuscript, offered ongoing guidance and provided editing.

**BMC Pregnancy and Childbirth**  
**Perinatal Assessment of Risk of Mental Illness: Experience of First-time Mothers and Clinicians, Australian Private Hospitals**  
 --Manuscript Draft--

<b>Manuscript Number:</b>	PRCH-D-19-01284R1	
<b>Full Title:</b>	Perinatal Assessment of Risk of Mental Illness: Experience of First-time Mothers and Clinicians, Australian Private Hospitals	
<b>Article Type:</b>	Research article	
<b>Section/Category:</b>	Maternal health and pregnancy	
<b>Funding Information:</b>	NHMRC (S93077814) National Health and Medical Research Council (Application ID 568892)	Mrs Deborah Jane Sims Dr Fenglian Xu
<b>Abstract:</b>	<p>Background The many changes in becoming a mother increase the risk of developing a mental illness in the perinatal period. Comprehensive, psychosocial assessment for risk of mental illness is recommended as part of routine perinatal care for all women. In Australia, this assessment was less likely to be undertaken for women who gave birth in a private hospital compared to women who gave birth in a public hospital. Therefore this study aimed to explore the experience of perinatal assessment of risk of mental illness for first-time mothers who gave birth in a private hospital. Method The results are from an explanatory mixed-methods study on the risk of the development of a perinatal mental illness and its relationship with the delivery of, or lack thereof, a parenting support service. Interviews were conducted with first-time mothers, midwives, nurses, obstetricians and paediatricians at two Australian metropolitan private hospitals. Content analysis of the interview data provided exploration and interpret their experience of assessment of risk of mental illness. Results Interview data were gathered from 32 participants. Four themes on assessment of risk of mental illness for these women were described: part of routine perinatal care; comprehensive psychosocial assessment; coordination between care providers and lack of mental health resources. Conclusion For mothers who gave birth in a private hospital, comprehensive psychosocial assessment of risk of mental illness may not have been provided as part of the routine perinatal care and not coordinated between care providers. A lack of mental health resources cannot be regarded as a barrier to provision of these services.</p>	
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<b>Response to Reviewers:</b>	Thank you, all 11 requests have been addressed.
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## **Perinatal Assessment of Risk of Mental Illness:**

### **Experience of First-time Mothers and Clinicians, Australian Private Hospitals**

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## Abstract

### Background

The many changes in becoming a mother increase the risk of developing a mental illness in the perinatal period. Comprehensive, psychosocial assessment for risk of mental illness is recommended as part of routine perinatal care for all women. In Australia, this assessment was less likely to be undertaken for women who gave birth in a private hospital compared to women who gave birth in a public hospital. Therefore this study aimed to explore the experience of perinatal assessment of risk of mental illness for first-time mothers who gave birth in a private hospital.

### Method

The results are from an explanatory mixed-methods study on the risk of the development of a perinatal mental illness and its relationship with the delivery of, or lack thereof, a parenting support service. Interviews were conducted with first-time mothers, midwives, nurses, obstetricians and paediatricians at two Australian metropolitan private hospitals. Content analysis of the interview data provided exploration and interpret their experience of assessment of risk of mental illness.

### Results

Interview data were gathered from 32 participants. Four themes on assessment of risk of mental illness for these women were described: part of routine perinatal care; comprehensive psychosocial assessment; coordination between care providers and lack of mental health resources.

### Conclusion

For mothers who gave birth in a private hospital, comprehensive psychosocial assessment of risk of mental illness may not have been provided as part of the routine perinatal care and not coordinated between care providers. A lack of mental health resources cannot be regarded as a barrier to provision of these services.

### Keywords

Mental illness, psychosocial assessment, perinatal, private hospital, experience.

## Background

The many changes experienced while becoming a mother, increase the risk of developing a mental illness [1-4]. One in five women will experience mental health issues during the perinatal period [4, 5]. Mental illness during the perinatal period may have serious long-term effects on the wellbeing of women, their babies and families [6-9]. During pregnancy the complications of mental illness are reported to be higher than physical complications such as gestational diabetes and hypertension [10]. Despite a quarter of women experiencing perinatal mental illness developing chronic or recurrent illness two thirds will remain untreated [11].

Guidelines that aim to improve this deficit recommend a program of assessment of the risk of mental illness for all women that: is integrated within routine care, provided as a comprehensive, psychosocial assessment; is integrated within perinatal care; and is not withheld due to lack of resources [12-17]. However, women who gave birth in an Australian private hospital were less likely to be provided with assessment of their risk of developing mental illness [18, 19]. National guidelines recommend that both protective and risk factors for mental illness are assessed in the perinatal period within the context of the parenting role, as an integral component of assessing the entire parenting and integration of assessment tools, such as the Edinburgh Postnatal Depression Scale, is part of effective psychosocial assessment [12]. Assessment tools provide a starting point and then allow comparison to detect change over time [15].

This study aimed to explore assessment of the risk of mental illness for mothers who gave birth in a private hospital through thematic analysis of the experiences of women and clinicians. Exploration and integration of interview data provided four themes on assessment: part of routine care, comprehensive psychosocial assessment, coordinated perinatal care and mental health resources.

## Method

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3 Perinatal mental illness risk assessment was examined as part of an explanatory,  
4 sequential mixed-methods study on social support services, self-efficacy and risk of  
5 mental illness for first-time mothers who gave birth in a private hospital. A qualitative  
6 descriptive methodology provided the most flexible method to gather, explore,  
7 interpret and present findings on the experiences of first-time mothers and clinicians  
8 [20]. The research explored the experiences of diverse experiences in order to  
9 circumvent generalisability [21-23].  
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### Recruitment

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21 Participants were recruited from two private hospitals in metropolitan NSW, Australia.  
22 Both hospitals provided maternity care for a diverse multicultural population of 2000  
23 women who give birth each year. Participants included both first-time mothers and  
24 clinicians. Primigravid women who had received maternity care in the hospital in the  
25 prior four to six months were recruited from both hospitals. Additionally, clinicians  
26 who provided maternity care were recruited from both private hospitals. Midwives,  
27 obstetricians, nursery nurses and paediatricians were invited to participate. These  
28 participants were recruited using both convenience sampling and snowball sampling  
29 [21, 24]. To maximise diversity of experience data multiple, simultaneous  
30 recruitment strategies were employed. These are listed in Box 1.  
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## Data Collection

Following recruitment, data were collected through interviews and two focus group interviews. An important aspect of data collection and analysis was the verification cycle of questioning and confirmation that was undertaken at each stage: during interviews, between interviews and between phases. This process narrowed the field of endeavour and thus provided focus that allowed the collection of diverse data on the assessment of risk of mental illness [25].

Midwives and nurses were invited to participate in focus-groups that encouraged discussion between participants and facilitated a variety of perspectives [23]. To promote the likelihood of discussion occurring, focus group questions were piloted on a group of nurses and midwives who were not participating in the study. Obstetricians, paediatricians and first-time mother participants were invited to participate in semi-structured interviews. The interview questions for clinicians were piloted on a paediatrician and an obstetrician who were not participating in the study. The interview questions for first-time mothers were piloted on two first-time mothers who were not participating in the study. This refinement of questions ensured that they were focused on the purpose of the study, being the risk assessment of mental illness, and as a consequence, the interview process minimised any likelihood of a negative effect on the participant, especially on the mother-baby dyad. Given this consideration, interview questions are provided in the supplementary information.

Analysis of the data was undertaken in two distinct steps. Analysis Step 1 began as interviews were conducted and the researcher reviewed transcripts to discover additional questions or offer additional findings [25]. Step 2 was thematic analysis of assessment of the risk of the development of mental illness based on the literature. Box 2 defines the four subthemes.

## Results

Interviews were conducted with eight first-time mothers aged in their 30s, six of whom had completed tertiary education. Five of the babies were male and three were female. Twenty three clinicians contributed; 11 midwives, three nurses, six obstetricians and three paediatricians. The demographic characteristics of these participants are provided in (Tables 1 and 2).

The findings encapsulated the stakeholder experience of perinatal risk assessment of mental illness for first-time mothers who had given birth in a private hospital. The four themes were 1) part of routine care, 2) a comprehensive psychosocial assessment 3) integrated care 4) mental health resources. Pseudonyms have been used to maintain anonymity.

### Part of Routine Care

In both focus groups, the midwives and nurses agreed with each other that perinatal psychosocial assessment was not routinely provided for women who gave birth in that hospital. Additionally, focus group 1 participants concurred that assessment was part of routine care for women who gave birth in a public hospital:

Participant 2: I think a lot of that [responsibility] sort of goes on the obstetricians, in terms of antenatally. We often don't meet them [mothers] until they're in hospital, or maybe a class. But in the public system they do.

Participant 3: That's probably handled a lot better in the public system.

This quote demonstrated the midwives' and nurses' belief that assessment was not provided as part of routine care for women as well as their belief that assessment was provided for women who gave birth in the public hospital system. These understandings were supported by all participants within both focus groups who

demonstrated agreement, either verbally or through body language (as noted within field note entries).

While psychosocial assessment is strongly advised as part of routine care for mothers it is not consistently implemented. The nurses and midwives went on to explain that some obstetricians who provided care at their hospital do organise a referral for screening for all of mothers for whom they provided care.

Participant 1: Some of our obstetricians do refer all their ladies to clinical psychologist to do screening during pregnancy.

Participant 2: But not all do.

(Field note: All other participants gestured agreement, verbally or head nod.)

The agreement among participants demonstrated their belief that risk assessment of mental illness was provided as part of routine care for only some women. This assessment was determined by which obstetrician was providing care.

During interviews the women were asked if they had received assessment of their emotional health and well-being or of their mental health during the perinatal period. The following response was typical:

Interviewer: So, in regard to your emotional health and well-being, or your mental health, did you have any formal assessment during the pregnancy?

Jessica: No? (answered with puzzled expression on face and questioning tone in voice)

Interviewer: What about after the pregnancy?

Jessica: No? (answered with puzzlement)

Jessica's response was clear that she had no recollection of assessment, either prenatally or postnatally. In addition, the puzzled expression on her face and her

1 questioning tone of voice when she answered 'No?' conveyed that assessment was  
2 unfamiliar. Five of the eight interviewed did not recall undertaking any assessment of  
3 emotional well-being or mental health.  
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7 One of the women who had received an assessment, explained her surprised that all  
8 women did not receive assessment:  
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12 I've also heard that not all obstetricians do that assessment. When I've  
13 mentioned to a few of my friends that doctor [name] had got me to do the  
14 [Edinburgh Postnatal Depression Scale] questionnaire, they were quite  
15 shocked and said that not all obstetricians do that. (Rebecca)  
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22 Rebecca may have thought that the Edinburgh Postnatal Depression Scale was  
23 routine care for all women. Her experience that other mothers were shocked that  
24 she had completed the EPDS demonstrated that other women were unfamiliar with  
25 the assessment.  
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### 31 Comprehensive Psychosocial Assessment 32

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34 Three of the women did receive assessment; although not a comprehensive  
35 psychosocial assessment, there was variety in the assessment content. Postnatal  
36 mental health was informally assessed for one mother through the clinician asking a  
37 question. Lauren's family doctor asked her about coping?  
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43 ... she [family doctor] always asks if I'm okay? Especially because he [baby  
44 Logan] has had a lot of issues, [she asks] how am I mentally coping? (Lauren)  
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48 The assessment approach used by this family doctor is limited to a response to a  
49 single question. A similar approach was undertaken by one of the obstetricians, who  
50 assessed mental health of the mother as part of routine postnatal care, using a single  
51 question on the woman's mood:  
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1 I believe I have a better feel for the patient [mental health] if I ask them directly  
2 how their mood has been. It is one of my standard questions in the six-week  
3 postnatal review. But I don't use a standardised tool. (Obstetrician 004)  
4  
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6

7 The midwives and nurses in both focus groups were asked if a tool was used to  
8 assess mental health. This participant confirmed that midwives did not use a tool for  
9 the assessment, but she believed that midwives should use a tool to assess risk of  
10 mental illness by stating:  
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16 Participant 1: I think we should, but we don't.  
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20 In this group the participants agreed, either using a verbal affirmative or through body  
21 language. The participants' response was the same in the second focus group,  
22 suggesting that at these two hospitals midwives and nurses do not use tools to assess  
23 risk.  
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29 In another example Nicole explained that the obstetrician provided an Edinburgh  
30 Postnatal Depression Scale. She explained how easily she manipulated the screening  
31 tool and pretended that she was well in order to avoid referral to a psychologist. In  
32 this way Nicole was able to manipulate her responses and avoid referral for  
33 assistance.  
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40 So, if you don't want to see someone, it's very easy to answer them, so that  
41 you don't have a problem and I don't know if that's a common thing with  
42 people with mental health but I mean, I know that I had a psychologist that I  
43 didn't like, so for three sessions in a row I said I was fine. ... those tests are  
44 so easy, it's not a secret test, you pick the right answer and you get a good  
45 score. So, if you don't want help, or if you don't want to admit you've got a  
46 problem, then it's very easy to avoid it. (Nicole)  
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54 This description from Nicole showed how tailoring Edinburgh Postnatal Depression  
55 Scale responses either enables access to psychological support or to avoid this  
56 potential diagnosis of mental illness and subsequent support.  
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## Coordinated Between Care Providers

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3 Coordination of assessments of risk of mental illness between care providers was  
4 not evident in the findings. Some of the women recalled being assessed by different  
5 clinicians at different times. Nicole recalled that in the postnatal weeks she  
6 completed one EPDS with her obstetrician and on multiple occasions, with a child  
7 and family health nurse.  
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13 ... my obstetrician, she did one [Edinburgh Postnatal Depression Scale]. Um,  
14 I scored badly. I then did one [Edinburgh Postnatal Depression Scale] with  
15 the family health woman [nurse]. I scored worse. [Laughs] 21 out of 30 or  
16 something, on the Edinburgh thing [Edinburgh Postnatal Depression Scale]. I  
17 then did another one, because she [nurse] likes to keep up on that, and I  
18 needed to get another referral so that I could see my psychologist. And no  
19 doubt, I will probably end up having to do another one again. (Nicole)  
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28 Her tone of voice and turn of phrase suggested that she appeared resigned to the  
29 inevitability of completing another Edinburgh Postnatal Depression Scale in order to  
30 obtain a referral to a psychologist and of having to complete further Edinburgh  
31 Postnatal Depression Scale in the future. Such an experience suggests a lack of  
32 integration of postnatal care between the obstetrician and the nurse.  
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## Mental Health Resources and Assessment

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42 The clinicians provided women with information to access support for mental illness  
43 when they recognised a need. The following examples were typical of the support  
44 organisations for women experiencing perinatal emotional distress or illness that  
45 clinicians described. This midwife listed three mental health resources that she  
46 recommends to all women in her care.  
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53 So, Internet wise, I talk [to the women] about PANDA, I talk about Beyond  
54 Blue, I talk about Gidget Foundation, as they all have great online resources.  
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56 (SF002)  
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1 All of the midwives and nurses in the focus group indicated their agreement, through  
2 their body language (nodded their heads) or verbally ('yes'). In the other focus group  
3 the same resources were listed by one participant-and the other-participants  
4 confirmed agreement. Paediatricians and obstetricians also provided women with  
5 access to support for mental illness  
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10 One of the paediatricians discussed facilitating access to mental health resources.  
11 In this example the paediatrician accessed a support service on the woman's behalf.  
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16 I've had a few patients who have had significant psychiatric problems and if I  
17 feel they're not coping I definitely speak to the obstetricians. We've accessed  
18 in-home care for some of those families [where the woman has significant  
19 psychiatric problems]. (NP003)  
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25 Although no formal assessment of mental illness was undertaken, an awareness of  
26 mental illness prompted the paediatrician to access in-home support services.  
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66 In this example the woman explained that the obstetrician accessed a support  
67 service on her behalf, after she completed an Edinburgh Postnatal Depression  
68 Scale. Her obstetrician referred her to her family doctor to have a mental health  
69 plan developed that would allow access to some additional resources.  
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101 ... he [family doctor] had to do a whole mental health assessment thing.  
102 (Rebecca)  
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166 The obstetrician assessed the risk of mental illness using the Edinburgh Postnatal  
167 Depression Scale, which prompted a referral to the woman's family doctor to access  
168 support services. This suggests that the obstetrician was aware of how the mother  
169 may be able to access the additional services through community services, yet did  
170 not undertake the mental health plan, possibly due to time constraints or experience.  
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2 Another woman recalled a prenatal assessment at the hospital that led to  
3 support from a psychologist:  
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6 I had one [emotional health assessment] just before Eli was born ... they  
7 offered it as part of the [hospital] service and I saw a psychologist at the  
8 hospital and she was great. (Amanda)  
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15 Amanda went on to describe how the support assisted her with the transition to  
16 parenthood.  
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21 She just helped me talk about the differences there were going to be from  
22 going ... from quite a big job that I have ... into being a mum. You know, a  
23 big change, and taking time off, and how things will be hard. And she was  
24 really good at that and making sure that I knew what was my purpose and I  
25 defined myself, so I didn't get lost in myself. (Amanda)  
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31  
32 Amanda has provided a thoughtful response that identifies the potential values for  
33 her of a one-off psychological intervention to provide encouragement for the  
34 development of protective intervention. Unfortunately mental health resources were  
35 only available to women, if the need was recognised by the clinician. This would  
36 suggest that a lack of resources was not a barrier to risk assessment as part of  
37 routine care, but required the active commitment of clinicians to facilitate access to  
38 these resources and support.  
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47 These findings demonstrated that in these private hospitals perinatal assessment of  
48 risk of mental illness was not provided as part of routine care for all women. When  
49 assessment was undertaken it was not as a comprehensive psychosocial  
50 assessment and there was a lack of coordination of assessment between hospital  
51 and community providers. A lack of mental health support services was not  
52 demonstrated as a barrier to undertaking assessment.  
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## Discussion

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There is limited research published into assessment of risk of mental illness for women who gave birth in a private hospital. The studies that have been published show that assessment was not provided as part of routine care. Studies on assessment of perinatal mental illness have determined that neither the Edinburgh Postnatal Depression Scale nor the use of a single interview question provide comprehensive psychosocial information. Studies on care across the perinatal period have demonstrate fragmentation of care between hospital and community providers.

### Part of Routine Care

The findings from this new study indicate that the women were not provided with a comprehensive psychosocial assessment to identify the of risk of mental illness as part of their routine perinatal care. This concurred with a previous study that examined perinatal risk of mental illness and demonstrated that women who gave birth in a private hospital were less likely to undertake formal assessment [18]. Two studies of private hospitals that had implemented an assessment program demonstrated high levels of acceptability [19, 26]. One of the focus group participants explained that as women are under the care of an obstetrician prenatally the midwives may be restricted in the assessment they can conduct.

### Comprehensive Psychosocial Assessment

These findings indicated assessment was not undertaken as a comprehensive psychosocial assessment. Participants in this study recalled either being asked one question on coping or completing the Edinburgh Postnatal Depression Scale. Use of a single form of assessment allowed some women to avoid detection. Neither the women, clinician or administrator participants discussed comprehensive psychosocial assessment although guidelines recommend a comprehensive clinical psychosocial interview, which may include the use of a structured tool such as Edinburgh Postnatal Depression Scale [17, 27, 28] to facilitate earliest identification

1 of risk of mental illness. The aim of comprehensive psychosocial assessment is to  
2 provide a multi-dimensional picture of the mother's psychosocial circumstance, not  
3 just symptoms of a mental illness [27]. The recommendation is for inclusion of risk  
4 factors; inadequate social support, intimate partner relationship issues, isolation,  
5 stressful life events, personality vulnerabilities, poverty, history of trauma and history  
6 of mental illness or substance abuse [27]. An Australian study of a public hospital  
7 screening program identified that 69.1% of midwives screened for depression using  
8 Edinburgh Postnatal Depression Scale [29]. Edinburgh Postnatal Depression Scale  
9 is a valuable instrument to assist recognition of perinatal mental illness; it was  
10 originally validated by health visitors of 84 women, revealing sensitivity over time and  
11 judged as successful in increasing the delivery of both sensitivity and specificity  
12 when family members were not present [30]. A review of 36 Edinburgh Postnatal  
13 Depression Scale studies showed moderate consistency and accuracy [31].  
14 Edinburgh Postnatal Depression Scale has been known to include ambiguity,  
15 exclude certain types of distress, have low positive predictive value, attempt to  
16 provide validation against a questionable gold-standard and misdiagnosis of  
17 transient distress; thus users of the scale should be aware that it, like other  
18 measures, has limitations. [32]. Appropriate care was shown to be problematic  
19 following administration of a screening tool at a single time point [33]. In a study of a  
20 residential EPS service, experienced child and family health nurses integrated  
21 information from assessment tools into psychosocial assessment when  
22 inconsistencies or mismatches exist in order to pinpoint or confirm areas of risk [34].  
23 Mental health aspects are entwined within the parenting issues and cannot be  
24 isolated from them [35]. In particular, perinatal psychosocial risk factors include  
25 recent stressors, mental health history, lack of partner support and history of abuse.  
26 (Austin & Committee 2013; Austin; Leigh & Milgrom 2008; Milgrom et al. 2011;  
27 National 2007). In Australia, child and family health nurses have a comprehensive  
28 knowledge of perinatal mental health risk assessment within child health and  
29 parenting framework from specialist education [36]. Most importantly, in a study of  
30 residential early parenting services, the experienced child and family health nurses  
31 determined vulnerability to perinatal mental illness may compromise ability to parent  
32 and identify interventions that diminish the risk of developing a mental illness [34].  
33 The completion of a questionnaire may decrease the likelihood that women will be  
34 truthful, where a comprehensive assessment of risk factors obtained through  
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1 conversation may build rapport and increase trust, resulting in a more accurate  
2 assessment of risk as well as development of resources for the woman.  
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### 7 Coordinated Perinatal Care 8 9

10 The findings of this study describe that assessment may not be coordinated between  
11 hospital and community providers. This finding is supported by other studies of  
12 perinatal services that demonstrated fragmentation and lack of co-ordination  
13 between early parenting support services [37, 38]. Guidelines recommend that  
14 perinatal care is integrated between primary, secondary and tertiary health systems;  
15 across health disciplines; between assessment and referral; across the perinatal  
16 time periods; and between service settings [27]. An American study disclosed that  
17 obstetrician assessment was lacking in detection, treatment and referral [39].  
18 Midwives were more likely than obstetricians to ask about mental health [40]. A  
19 qualitative study of perinatal psychosocial assessment described a negative  
20 emotional effect on the midwives from the cumulation of complex disclosure,  
21 frustration regarding referral and lack of support [41].  
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### 34 Mental Health Resources 35 36

37 The clinicians provided examples of actions taken when a women was identified as  
38 having potential risk factor. Importantly, a lack of resources or support service was  
39 not a barrier to assessment, as when clinicians recognised a need they did provide  
40 mothers with mental health resources. As this suggests that a lack of mental health  
41 resources was not the reason that perinatal assessment of risk of mental illness was  
42 not routinely provided to these women, the benefits of perinatal assessment are to  
43 provide information on factors that impact wellbeing and raise awareness on care  
44 options [27]. National guidelines suggest one outcome of psychosocial assessment  
45 may be referral to mental health services [28]. Additionally the Australian  
46 Longitudinal Study on Women's Health Women subsample (778) showed that  
47 women who were not asked about their emotional health were less likely to seek  
48 support during the perinatal period [42]. Perinatal assessment of risk of mental  
49 illness provides an opportunity for women to develop social supports, potentially both  
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as an individual support service and a community support network, proving an effective mechanism that can ameliorate the risk of perinatal mental illness [27].

## Conclusion

In line with international recommendations and Australian legislation, this study provided evidence that comprehensive psychosocial assessment of risk of mental illness was not provided as part of routine, integrated perinatal care for women who gave birth in private hospitals, although mental health support services being available.

## Recommendations

The comprehensive assessment of risk of mental illness as part of routine, coordinated perinatal care has been demonstrated to be feasible and highly acceptable in the private hospital setting [26, 43] and should be available to all women who give birth in a private hospital.

## Limitations

The sampling strategy that was used for this study, snowball sampling, makes it impossible to make inferences about populations based on the obtained sample. Future studies may investigate the situation at other private hospitals in other settings.

In order to define the issue future studies may determine the prevalence of perinatal mental illness for women who gave birth in a private hospital compared to women who gave birth in a public hospital. A description of assessment experiences between new mothers who gave birth in a public hospital compared to first-time mothers who gave birth in a private hospital would provide greater depth on this topic.

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Additionally, as paternal depression has been shown to correlate with maternal depression in 10% of partners during the perinatal period [44], further research that considers assessment experience of first-time fathers may provide practical information to develop services for mothers who give birth in a private hospital.

Issues of debate on screening; sensitivity, specificity, positive predictive value and clinical cut-off remain outside the scope of this study.

## Clinical Practice Contribution

This evidence may strengthen implementation of services to provide comprehensive assessment of risk of mental illness as part of routine, coordinated perinatal care for women who give birth in a private hospital. Provision of this services may facilitate early intervention that has the potential to ameliorate the risk of mental illness and improve outcomes for women and their families.

## Declarations

1. Ethical Approval – The study was approved by the NSW Population and Health Services Research Ethics Committee (AU RED Reference: HREC/11/CIPHS/33) on 13 May 2016; the Human Research Ethics Committee of the University of Technology Sydney, Australia (ETH16-0839) on 3 April 2017; North Shore Private Hospital Ethics Committee (NSPHEC2017-LNR-006) on 14 June 2017 and Sydney Adventist Hospital Ethics Committee (HREC2017-009) on 14 August 2017
2. Consent to participate – all participants received ethics committee approved information and voluntarily agreed to consent to participate in writing.
3. Consent for publication – Not Applicable
4. Availability of Data and Materials - The datasets generated and analysed during this study are unavailable due to small sample size potentially allowing identification of participants.
5. Competing Interests - The authors had neither financial nor non-financial competing interests.

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7. Author Contributions – DS was the main contributor through design, data; collection, analysis and interpretation. CF, CC and FX supervised the design of the study and provided guidance at each stage. CF was a major contributor providing assistance with analysis and interpretation of the data. All authors contributed to creation of the manuscript.
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<b>Table 1 Characteristics of clinicians and administrators</b>				
Factor	Value	Clinicians	Administrators (A)*	Number
Sex	Male	7	0	7
	Female	19	0	19
	Total	23	3	26
Years of experience in specialty	0-9	6	0	6
	10-19	6	0	6
	20-29	6	0	6
	30+	5	3	8
	Total	23	3	26
Duration of practice at hospital	0-9	7	0	7
	10-19	14	0	14
	20-29	1	3	4
	30+	1	0	1
	Total	23	3	26
Qualification	Midwives (M*)	11	3	14
	Nurses (N*)	3	0	3
	Obstetricians (O*)	6	0	6
	Paediatricians (P*)	3	0	3
	Total	23	3	26
*Denotes participant's profession at end of each quote				

<b>Table 2 Characteristics of Women Participants</b>	
<b>Participant Pseudonym</b>	<b>Participant Professional Background</b>
Sarah	Manager
Jessica	Accountant
Rebecca	Teacher and Social Worker
Melissa	Doctor
Lauren	Hair Stylist
Emma	Lawyer
Nicole	Real Estate Broker
Amanda	HR Director

Box 1 – Recruitment Strategies	
Participant	Strategy
midwives and nursery nurses	<p>Distribution of study announcement via email, by maternity administrator</p> <p>Study posters placed in maternity clinician common areas</p> <p>Invitation to attend an in-service education session on Transition to Parenthood, provided by DS</p> <p>Snowball recruitment was undertaken to recruit nurses and midwives</p>
visiting medical officers (VMOs) - obstetricians and paediatricians	<p>DS visited VMO consulting rooms to discuss the study with clerical staff and provide a study flyer</p> <p>DS telephoned to follow-up with interested VMOs</p> <p>Snowball recruitment was undertaken to recruit additional VMOs</p>
women participants	<p>Recruited directly by the researcher at hospital prenatal classes</p> <p>Recruited directly by the researcher at postnatal clinics</p> <p>Snowball recruitment was undertaken through clinicians, to recruit women participants</p>

Box 2 - Themes and Subthemes on Assessment of Risk of Mental Illness	
Theme	Subtheme
1. Characteristics of assessment	Part of routine perinatal care Comprehensive psychosocial assessment Coordinated between care providers
2. Barriers to assessment	Lack of mental health resources Non-referral for mental health services

## **Chapter 6 Findings of Phase 2 – Maternal Self-Efficacy and Infant Feeding Support Services**

This chapter will present the finding for the second theme - “Infant Feeding support” that related to maternal self-efficacy. Maternal self-efficacy is a woman’s belief in her capability to execute and organise tasks related to her baby (Leahy-Warren, McCarthy & Corcoran 2011b). An essential component in the development of maternal self-efficacy is social support (Leahy-Warren, McCarthy & Corcoran 2011b; Shorey et al. 2015; Zhang & Jin 2016). Maternal self-efficacy plays a significant role in the maintenance of mental health (Leahy-Warren, McCarthy & Corcoran 2011b; Shorey et al. 2015; Zhang & Jin 2016). The theory of Human Agency, by Albert Bandura, demonstrated the relationship between mental disorder, self-efficacy and social support (Bandura 1993). Template analysis (*King 2012*) was undertaken to explore and interpret support services in relation to determinants of self-efficacy. Based on this theory an a-priori template was developed to explore self-efficacy. From this analysis the main self-efficacy themes were support to set own goals, mainly evident in relation to infant feeding support. In this chapter a combination of the new mothers’, clinicians’ experiences and administrators’ most commonly pertained to the maternal self-efficacy determinant of setting own goals. The main theme of *support to set and achieve own infant feeding goals* is presented through two subthemes: *unrealistic expectations of breastfeeding* and *unsupported in infant feeding*. Interviews were conducted at two Australian private hospitals with eight new mothers, 23 clinicians (midwives, obstetricians, nurses and paediatricians) and three hospital maternity administrators.

### **6.1. Support to Set and Achieve Own Infant Feeding Goals**

Infant feeding is one of the first interactions with an infant as feeding can happen within minutes after birth. Infant feeding is a major task to be mastered as a new mother and can have a significant impact on maternal self-efficacy and the developing mother infant relationship.

Participants discussed infant feeding support services (classes, consultations and clinics) in relation to the self-efficacy determinant of setting and achieving goals. Several factors were highlighted by the women that impacted their ability to feed their infants. The women described that they felt unsupported in gaining knowledge and competence in feeding their infants. They felt unsupported in feeding decision-making, as they felt pressured to breastfeed, guilty if they did not breastfeed and unsupported in the process of learning how to feed their infant with formula. Women also felt unprepared for infant feeding as these factors were seen to undermine their confidence resulting in the development of maternal self-efficacy being affected. Setting and achieving their own goals for infant feeding were affected by the perception that their feeding decisions were unsupported and that their expectation of breastfeeding was unrealistic.

## **6.2 Unrealistic Expectations of Breastfeeding**

The first subtheme of infant feeding was feeling unprepared due to unrealistic expectations about breastfeeding. Women identified and explained their unrealistic expectations in that they had believed breastfeeding was *natural* and therefore they were surprised when they found it problematic. As further evidence, they were surprised that breastfeeding required so much time and that the changes in the baby's development required adjustments in breastfeeding patterns as a result. The unrealistic expectations about breastfeeding made setting realistic parenting goals or being able to meet the unrealistic goals unlikely and therefore maternal self-efficacy development was likely to be compromised. This overarching belief of the women was that breastfeeding was *natural*, this belief led some women to anticipate that it would be easy or problem free. One mother, Jessica, explained her expectation that breastfeeding would occur naturally, however after the baby was born, she found that she was required to learn *skills* for breastfeeding.

... I think what would have been handy to know is more on starting breastfeeding. You hear so much it's natural and ... that's what our bodies are designed for. But I didn't actually realise that it was a learnt skill and it's actually not that easy ... (Jessica)

Prenatal breastfeeding preparation may have reduced the risk of Jessica developing the unrealistic expectation that breastfeeding did not require learning skills. However, the problematic nature of support services for women who give birth in a private hospital may mean that the service was not offered, was unavailable or Jessica did not realise the importance or usefulness of such a service.

Women underestimated the requirement for breastfeeding, including the time required for breastfeeding. Following discharge from hospital with her new baby Lauren had met with the community nurse, who explained the time commitment for breastfeeding. This was far greater than she had expected:

I don't think, at that point, anybody had actually taken into account how physically draining it was to be sitting on the couch for like eight hours, more than eight hours a day ... feeding the baby. (Lauren)

Lauren explained that she felt overwhelmed at the time she was required to spend feeding and she felt that she was expected to give feeding priority at the expense of her own wellbeing.

This revelation highlights another factor in breastfeeding support that the woman's expectation of breastfeeding may remain static, causing incongruity with the baby's behaviour or development. Establishing breastfeeding is a dynamic process with rapid changes to baby behaviour during the first days of life. Clinicians provided insight that there are many physiological and behaviour changes in the first few days of life that require modification to the feeding goals and if women are unaware of these changes, they may be surprised and become disheartened. Midwife 6 explained the risk of a setback due to having a knowledge deficit about baby feeding and sleeping:

... sometimes they have been getting a handle on it [breastfeeding] on day one or day two and then, of course, things change again on day three and they ... sort of ... get thrown back to square one. But if they had

an understanding that on a daily basis things will change and it will change largely based on when their milk comes in. (Midwife 6)

Midwife 6 identified that breastfeeding was not a linear process but dynamic and at times a rapidly changing process. For a woman to have an understanding of the expected developmental changes in the baby, information must be accessed and processed by the woman. Providing anticipatory guidance on breastfeeding and sleep will better support women to achieve realistic parenting goals if they are able to process the information.

As infant feeding and sleep are so closely related, the issues of sleep in terms of expectation are also presented. The women's expectation that a baby would sleep for longer periods was common and the realisation that a baby would wake often and during the night was seen to cause the mother to be stressed. However, support services that provided anticipatory guidance were identified as helpful. In one example Amanda felt that she put pressure on herself for her baby, Elijah, to sleep through the night. She related that her family doctor had helped her to have a more realistic expectation of her baby's sleep behaviour.

... she [family doctor] said, "Stop putting pressure on yourself to think that he's going to start sleeping through, reflux babies are generally more unsettled, and he might not sleep through till say 10 months", [this understanding] just takes the pressure off. (Amanda)

Importantly, information on sleep behaviour provided Amanda with a more realistic expectation about behavioural development of babies diagnosed with reflux. When the doctor provided this anticipatory guidance on Elijah's behaviour Amanda was able to set more realistic baby sleep goals that ameliorated stress and supported her maternal self-efficacy. Amanda now had a response to counter comments by others that her baby should be sleeping through the night. The issues of maternal fatigue, lack of parenting strategies or support to manage these difficulties may be underlying concerns for a woman

when she discusses baby sleep. During the early weeks of an infant's life, most women require meaningful dialogue and assistance through anticipatory guidance about expectations related to baby development and support information to provide awareness of sleep logistics, infant behaviour. This guidance will enable the development of realistic expectations and coping strategies.

The women's unrealistic expectations, consisting of breastfeeding being "natural", underestimation of the time requirement for breastfeeding and the developmental adjustments required when breastfeeding all made it difficult for the women to set realistic goals. These findings also highlighted the different levels of expectations of breastfeeding between the mothers and clinicians. Clinicians believed that mother's expectations of breastfeeding were unrealistic, and they were not surprised that the women felt unprepared for parenting. Women's expectations of breastfeeding were important to clinicians. The nurse in this example describes the importance of women's expectation of baby development in order to provide support:

... the main thing is that it's about expectation of what a baby does. It's about their [women's] expectation of where their [babies are] at. (Nurse1)

Clinicians believed it was important to know women's expectations of breastfeeding, but the impression is given that women should have the same expectations of breastfeeding as clinicians. The nurse explains that understanding the woman's expectations is important to provide woman centred support.

We're also interested in what ... [woman's] expectations are, if we are on the same page as them. (Nurse1)

In her expression of 'same page' the nurse shows that care is not solely centred on the baby but includes an awareness of the interrelationship of mother and child. This was a shared professional concern made evident in the research as there was consensus from clinicians that women's expectations of

breastfeeding were unrealistic. More explicitly, a paediatrician explained the belief that to support the new mothers in her care she must first address their unrealistic expectations.

We talk about the feeding, which takes up a huge chunk of time. ... And I talk a lot about expectations and what they should be expecting. Because I think that, as much as they read and try and do their research, I think expectations are often completely wrong. (Paediatrician 9)

This paediatrician's account illustrated that although women seek information there remains a disparity between their expectations of breastfeeding and the reality. Of particular concern is where expectations remain unrealistic, the possibility of women setting achievable feeding goals is decreased, with the significant risk of weaning and hence so is the feasibility of facilitating maternal self-efficacy.

In particular, concerns were raised by clinicians that breastfeeding expectations remain unrealistic despite the provision of breastfeeding support and education. This lactation consultant explained that although she had provided information, the woman's expectations of her baby in regard to feeding and sleep remained unrealistic. The tone of voice that the lactation consultant used conveyed her sense of frustration.

I thought 'she's leaving hospital still not understanding about feeding'. I've said to her 'I'm just warning you, you must feed or express overnight. You cannot sleep overnight' (her breasts were pretty rock hard). Her answer to me, on day six, was 'Yes, I know. So if the baby sleeps, I need to get up to express.' I said, 'Your baby will NOT sleep all night.' She was saying '... if the baby stays asleep!' If the baby stays asleep! Well, I've failed! I don't know who else has failed but I've certainly failed in my explanation. (Lactation Consultant 2)

The lactation consultant appeared to be frustrated through the use of the words 'well, I've failed'. Even after rendering assistance by providing information and

trying to assist the woman adjust her expectation, this woman seems to remain underprepared for the demands of breastfeeding.

The reduction in unrealistic expectation is potentially a systemic issue related to the effectiveness of breastfeeding classes. This study demonstrated that women may consider breastfeeding classes as being ineffective, despite acknowledging their potential to prepare women for breastfeeding. Those women who spoke about breastfeeding classes had not found the classes they attended to be helpful; although one woman suggested that she thought that they could be helpful. Counter to the mothers' beliefs, clinicians that spoke about breastfeeding classes referred to them as being very helpful to prepare women for or support women with breastfeeding. These women's expectation of infant feeding was discussed in relation to their attendance at breastfeeding classes. Jessica suggested that the class should be more realistic regarding breastfeeding pain and delayed lactation. She also suggested that classes should provide a hopeful message regarding the correlation between perseverance and achieving breastfeeding success.

Even if it was in the [prenatal] breastfeeding class, just mentioning, like, just the realities and being realistic and yes, it can hurt and it might not happen straightaway but if you persevere, you should be able to get there ... (Jessica)

This aligned with the clinicians who expressed their belief that if women attended breastfeeding classes such education would help to develop more realistic expectations. For instance, one particular lactation consultant explained that in-patient classes provide women with a more realistic expectation of breastfeeding by using an informal teaching method of facilitating a conversation between women.

... people should understand [in-patient breastfeeding class] it is just a chat between mothers, so that their expectations are on the same level. (Lactation Consultant 2)

However, attendance at the class and methodology were not the only factors which were implicated in the research, but timing after birth needed consideration also. In particular, breastfeeding classes attended in the first few days after birth may have left some women with unrealistic expectations that impacted on their ability to set realistic feeding goals. For instance, Rebecca felt that when she attended these classes, she was not ready to learn how to feed as she was focused on becoming familiar with her child.

... there are [breastfeeding] classes in the hospital but that was more teaching you how to breastfeed ... I think that's too early when you're in the hospital. You're sort of learning more about the baby than how to feed .... (Rebecca)

This suggests that the class she attended did not convey to Rebecca the imperative to master the critical maternal role of breastfeeding as early as possible, in order to ensure the baby is nourished and able to settle. The alternative interpretation could be that Rebecca and her baby have not encountered any issues to date with breastfeeding and so the need or motivation to refine her ability to breastfeed has not arisen.

This study has demonstrated that for some women breastfeeding classes may not have adequately resolved the issue of unrealistic expectations. In terms of preparation for breastfeeding the findings indicated that despite breastfeeding classes some women had unrealistic expectations that left them feeling unprepared to set realistic parenting goals. Setting unrealistic infant feeding goals would not be supportive of maternal self-efficacy and may increase the risk of mental disorder due to the possible resulting feelings of disappointment, failure and/or guilt.

### **6.3 Unsupported in Infant Feeding**

The second subtheme of being unsupported to develop the necessary knowledge and skills to feed their infant, captured the notion that women felt

pressured by clinicians to breastfeed and felt guilt when they were not breastfeeding as they were expressing or using formula to feed their infant. Additionally, women who were not breastfeeding explained that they felt unsupported both in decision-making about feeding and about the process of formula feeding. Maternal self-efficacy is unlikely to be supported when women felt unable to set their own infant feeding goals due to pressure from others to set breastfeeding as the only goal. For women who felt pressure to breastfeed, not only did they feel unsupported, but their sense of self-efficacy may have been undermined as well as experiencing stress due to feelings of guilt that may contribute to increasing the risk of developing a mental disorder.

When women discussed breastfeeding there was a theme of feeling that they were pressured to breastfeed by hospital midwives and by community nurses. For example, Nicole felt that her interactions with nurses in the community were stressful due to the pressure to breastfeed.

... there was so much [breastfeeding] stress ... there was a lot of pressure ... from the community health nurses (Nicole)

Some of the clinicians did sense the pressure to breastfeed that midwives and nurses applied to women. This obstetrician illustrated the issue that midwives may be more focused on breastfeeding, thus prioritising the establishment of baby nutrition, rather than on assisting the woman to make her own feeding decision that may contribute to a stronger mother – baby relationship.

... I find that midwives really push it; 'you've got to keep on going, you've got to keep on breastfeeding' and they [women] just say, 'I don't want to do this, this is really getting me down, it's not what I really want.' But it feels as if they're obliged to keep on going. (Obstetrician 2)

The obstetrician went on to explain his belief that lactation consultants may have a more balanced view regarding expectation of breastfeeding continuation.

... lactation nurses, they're much more balanced in how they view it. Whereas the general midwives maybe don't ... they don't see the real difficult cases coming back week in, week out. Whereas a good lactation consultant knows when to call it a day ... (Obstetrician 2)

The obstetrician highlights the importance of clinical experience and extended exposure to women who are struggling to breastfeed beyond the short period of time midwives have during a woman's hospital stay. This clinical experience is related to being a 'good' lactation consultant.

Women who felt unable to breastfeed or who had decided not to breastfeed, reported that their feelings of guilt and pressure to breastfeed were their most common issues. And these issues resulted in then feeling stressed. Nicole described this as 'guilt' when she was unable to breastfeed and changed to formula feeding:

... you felt really guilty for not breastfeeding ... (Nicole)

Lauren who believed that she experienced stress directly as a result of breastfeeding issues as her baby, Logan, had reflux. She found that Logan cried frequently around feeding and this had resulted in her feeling stressed.

I struggled, I did struggle. There were times where you just couldn't stop him from screaming. (Lauren)

The use of the terms 'struggle' and 'screaming' adds emphasis to her statement. Lauren's sense of feeling hopeless to comfort her baby comes through as she did not have the ability to reduce his distress. This inability to calm her baby and relieve his distress is likely to have a profound impact on her development of maternal self-efficacy.

Thus, this study established that when women doubted their ability to breastfeed when they experienced stress. Emma shared details of the stress that she felt when she believed that her breast milk supply was dropping:

I was sort of panicking that my supply was just dropping and that I wouldn't be able to breastfeed her. (Emma)

The possibility of being unable to feed her child, which may have been perceived as a failure, caused Emma to panic about her breastmilk supply and this panic and sense of failure may have affected her mental health and further diminished her ability to breastfeed.

These interviews have revealed three problematic triggers signalling the need of support mechanisms: the guilt of feeling unable to breastfeed, the lack of support with feeding decision-making and with the process of formula feeding. As a result, the women who sought help with infant feeding had both positive and negative experiences. On a number of occasions when she had experienced difficulties with breastfeeding Lauren had contacted a parenting help-line and found this to be helpful.

I did ring [parenting support organisation], the hotline, a couple of times to talk to nurses there and they were good. (Lauren)

The stress of breastfeeding difficulties may have affected Lauren's maternal self-efficacy. As she accessed this parenting support service for herself, the very act of help-seeking may have provided reassurance and positively influenced maternal self-efficacy development.

While telephone support is a useful and convenient method of seeking support, it is not always available when needed as described by Rebecca.

She [Breastfeeding telephone help-line volunteer] was really lovely. I was super emotional, and she was so nice ... but then I tried to call back again a few weeks later and they didn't have anybody that was available. So that was a little bit frustrating because it's also finding the time, if I knew the baby is asleep or someone else has got her, I just have that window to sort of speak to someone. I know they're volunteers, so it's

tricky to sort of man the phones all the time but that makes it difficult.  
(Rebecca)

Not having immediate access to advice can result in frustration even if the woman understands why it may not be available. Rebecca does balance her statement about being *a little bit frustrating* with taking some responsibility for the situation in terms of needing to find uninterrupted time to seek advice.

Being provided with support is not always of benefit as it has the potential to place undue pressure to breastfeed on mothers as stated in the next quote

but there was a lot of pressure too, [to breastfeed] from the community health nurses. (Nicole)

This lack of appropriate support is further illustrated by Lauren who did not always find the support provided by some health professionals of value. In the following extended story Lauren described that although she was attuned to her baby, the midwife did not listen to her concerns.

I could tell from day one there was something not right with him, and everyone just kept on trying to push the breastfeeding, breastfeeding, breastfeeding! ... But I just got to the point where I just went; 'No, I want to express. This [breastfeeding] is not working.' But yet I still got pushed and pushed and pushed [to keep breastfeeding]. And I just, it just wasn't going to work. He just was arching his back and screamed basically like, he was never going to do it [breastfeed] ... ever! (Lauren)

Rather than supporting Lauren to make her own decision on infant feeding, Lauren felt that the midwives were setting their own goals of achieving a successful breastfeed. Lauren went on to explain that the pressure left her feeling guilty and unsupported regarding feeding. This story was exemplified by other women's comments that midwives expected them to breastfeed. Lauren continued her story that she decided to cease breastfeeding.

I know breastfeeding is the right thing to do. But that's why I felt so guilty, because it was pushed on us so much and he [baby] wasn't going to do it. He was struggling. So, it was only because I said; 'No, I don't want to do this anymore. What are my [feeding] options?' But no-one offered the options to me. (Lauren)

Some of the women who had decided to cease breastfeeding talked of feeling unsupported with their infant feeding decisions. Lauren's story on infant feeding decision-making highlights the importance of providing support for women to set their own parenting goals and to achieve their goals to facilitate maternal self-efficacy. Rebecca spoke of receiving some assistance but not enough.

One of the ladies [community nurses] helped me [with breastfeeding] a little bit. But I don't feel, honestly, like anyone was able to help me enough, I guess because you're only there for 10 minutes with them. And it's not ... you're not in your own environment. And it's, I don't know, I just didn't find any of their help that amazing. (Rebecca)

Her experience of receiving breastfeeding help was limited. Interestingly, she acknowledges the importance of receiving help at home when *in your own environment*. This highlights the importance of contextual issues that can influence support that is provided and perhaps the readiness of women to learn once they have had time to identify breastfeeding issues and concerns that are developing away from a busy hospital setting.

A common complaint by women is feeling unsupported due to a lack of consistent advice.

... but feeding was definitely the main issue. So I'd be told ... this will help you attach him better, so I'd kind of practice doing that and then somebody else would come in and ... they'd say, "Oh, no, no, you should be doing it this way". (Sarah)

For women learning to breastfeeding being provided with changing and at times conflicting information about technique can result in confusion and frustration. While a change in technique maybe necessary the issue for a woman could be the way in which the advice is provide as illustrated in Sarah's example *oh, no, no, you should be doing it this way.*

The lack of information on the process of formula feeding also left some women feeling unsupported by the midwife. Lauren moves on to describe her uncertainty at the process of formula feeding.

I know breast is best, but I just feel that there wasn't enough support, for people who struggled in breastfeeding, with other avenues and options. If you can't breast feed, what to do, how to do it? You know, sterilising and silly things like that ... I'd be standing at the supermarket going; 'where do you start?' But there's none of that support ... even though I know breast is best, if you've got a child that isn't going to do it, where do you start? Where do you start? Things like sterilising, how many bottles roughly do you need, how many feeds do you need per day and all that kind of stuff, feeling all that stuff out, it's hard. (Lauren)

Lauren described her feelings of being unprepared and confused about the process of formula feeding; she was left to determine the process for herself. This equates to her not feeling supported in the process of formula feeding. Discrepancies were apparent in the cases with the goals set by the women, as opposed to the goals that were set by the clinicians for the women. In general, when women determine that the clinician is setting feeding goals, the development of maternal self-efficacy is likely not to be supported.

Maternity services administrators were provided with an executive summary of the women and clinicians' experiences of support services for first-time mothers that indicated that although women are individually provided with support, formula feeding women were left feeling unsupported in the formula feeding process. This suggested that there may be an opportunity for hospitals to

provide formula feeding services. In response to this suggestion, the administrators were not in favour of a support service for formula feeding, believing that it may have a detrimental impact on breastfeeding. In the following statements one of the maternity services administrators explained:

That is going to be quite controversial and quite challenging because for a long time now ... it's been very heavily weighted in giving information on breastfeeding and really not discussing formulas unless there really seemed to be a need. ... research seems to show that if ... the formula companies are given a voice ... formula feedings take off in leaps and bounds and breastfeeding drops. So, it's a constant challenge ...  
Difficult, difficult, difficult one. (Administrator 1)

The issue of clinicians not providing adequate information and support is dismissed by the administrator as she immediately focuses on the concern of information provided by formula companies. There is a concern that information about bottle feeding would be in opposition to hospital policy on the World Health Organization Baby Friendly Health Initiative (BFHI).

While Administrator 3 acknowledges the need for individualised information and support on an as needs basis

... we're supporting BFHI and that's what we should be striving for. That's not to say that people shouldn't be supported, but I think it's how you would show that support. And I think it actually needs to remain as a one-on-one rather than promoting any sort of open support of formula feeding. (Administrator 3)

The findings from the administrators may indicate a disparity between optimising the woman's mental health and breastfeeding. There is a level of incongruence between feeding support wishes of the woman as a service user and the interpretation of policy or of evidence by those in a position to provide support services. This diversity in experience suggests that hospital infant feeding support could be made more woman centred. The alternative of seeking

support in the early days after birth may be stressful for women who have made the decision or who have had to formula feed their infants.

The women's belief that they were not being listened to or having their decision about infant feeding questioned or rejected by clinicians extended past hospital discharge to include community services. This heartfelt description from one woman who sought infant feeding support from a parenting help-line demonstrated the stress that she felt when the nurse was operating from the expert model of care and assumed knowledge about woman's situation' rather than listening to her concerns in a woman centred way.

... they said, "What are you doing?" And I said, "I'm breastfeeding, but I've introduced, at six weeks, I introduced one bottle of formula a day." And they straightaway, before I got to whatever my question was around routine and things, they said, "You've got to stop that formula! Breast is best!" And I got this lecture ... I was so, um, sensitive and you know ... 'down'. I was like, "But I want my baby to be able to take a bottle, I want to be able to have that flexibility ..." And so, I didn't find that helpful ... (Amanda)

Amanda felt disempowered by the nurse's assumptions and lecture being given at a crucial time in the development of maternal confidence in both infant feeding and help-seeking. The "expert" approach adopted by the nurse may have led her to make judgement, rather than to use an explorative approach, in providing support for Amanda. Rather than enabling Amanda to set her own infant feeding goals, the nurse set the goals which appeared to Amanda to be 'breastfeed at any cost'. Amanda uses a distressed tone when describing the interaction with the nurse. Her use of the term 'I got this lecture' and 'I was sensitive' provide the impression that the nurse's approach alienated Amanda. This interaction was potentially detrimental to Amanda's developing maternal self-efficacy. The help-line was no longer likely to be identified as a support option if she felt that it would further reduce her confidence and increase her feeling of guilt resulting in a reduction in maternal self-efficacy.

Amanda's mother shared this opinion of the help-line as providing inappropriate advice as she encouraged her daughter to 'get off the phone':

... my mum was here at that stage and she saw me crying on the phone, going; "Get off the phone," and I was just like, "Mum, maybe I should stop doing it?" She's like, "Don't stop. You're doing everything right. This is one person's view ...". And so I didn't call them again. (Amanda)

Having a trusted person with Amanda assisted in affirming her belief in her decision-making and resulted in the decision not to contact the help-line again.

Other women did access services that supported them to set and achieve their own infant feeding goals. Lauren describes the support that she received from the community (CFH) nurse following discharge from hospital as she had initially continued breastfeeding, until she felt that she was unable to continue and then she changed to formula feeding.

I've been going to the [CFH] nurse and she was amazing. She tried ... to help me with breastfeeding and saw that it wasn't working, and she's been really supportive with bottle feeding ... she's been great. (Lauren)

In this instance, the nurse is portrayed as being supportive while still encouraging Lauren to have a final try to breastfeed. When breastfeeding was no longer viable, she supported Lauren's final decision to cease breastfeeding. This indicates that the community (CFH) nurse provided support for Lauren determined by Lauren's needs or preferences on infant feeding.

The conundrum of transition to motherhood is a challenging one. Preparation for motherhood was considered a difficult issue by all of women in this study. One mother suggested it may not even be possible to be prepared for parenting.

... just preparing new parents ... I guess you can't prepare people until you're in it. (Rebecca)

This comment reflects the complexity of the task of supporting women to prepare for parenting as the emotional and somatic nature of learning to parent may only be achieved through experiential learning. The complexity of the task of supporting women to internalise such a large volume of information, in order to set their own realistic and obtainable goals, may lead clinicians to utilise the expert model of care where the clinician provides prescriptive information and sets the goals. This expert model does not allow for coproduction of knowledge where the clinician is assisted by the woman to understand and provide advice for example that is compatible with the woman's: feelings; expectations; previous experience; existing knowledge; and the context of her day-to-day life. To facilitate preparation for motherhood is also highlighted in theme two: help-seeking.

## **6.4 Summary**

In summary the participants in this study provided information that suggests women held unrealistic expectations of breastfeeding that left them feeling unprepared to set achievable infant feeding goals. Also, women felt pressured to breastfeed and unsupported to set their own infant feeding goals. Where women felt unprepared and unsupported, maternal self-efficacy was likely to be undermined resulting in stress and distress, and increased risk of mental disorder.

The theme of feeling unprepared for infant feeding captured a disjuncture between the expectation and reality of breastfeeding. Unrealistic expectations of infant feeding, either the process or the outcome, lead women to set unobtainable goals. Where infant feeding goals were unmet, maternal self-efficacy was unsupported. These findings suggest the need for development of infant feeding support services, that are based on anticipatory guidance strategies, to facilitate women to set and meet realistic infant feeding goals and development maternal self-efficacy.

The theme of feeling unsupported with infant feeding depicted women's feelings of pressure to breastfeed, guilty for not breastfeeding as well as feeling unsupported when they decided to formula feeding their infant. Some clinicians believed that other clinicians pressed a breastfeeding agenda on women, regardless of the mother's wishes. Administrators and some of the clinicians voiced concern that providing specific formula feeding services would undermine the Baby Friendly Hospital Initiative. Where the women felt pressure from the clinician to set breastfeeding goals, maternal self-efficacy was not supported. These findings suggest the need for development of infant feeding support services that are woman centred and individualised. The parenting in partnership model of care, that is focused on developing a relationship and uses strength-based promotion of health and well-being, rather than the traditional 'expert' model of care, will support women to set and achieve their own infant feeding goals. Where women felt unprepared and unsupported a downward spiral of stress and distress, and a lack of feeding confidence diminished maternal self-efficacy and increased the risk of mental disorder. The development of anticipatory guidance-based, woman centred infant feeding support services may facilitate maternal self-efficacy and ameliorate the risk of mental disorder.

## **Chapter 7 Findings Phase 2 – Parenting Reassurance and Maternal Self-Doubt**

This chapter will present the finding for the third theme - “Parenting Reassurance and Maternal Self-Doubt” that related to maternal self-efficacy. The theory of Human Agency, by Albert Bandura (1993), demonstrated the relationship between mental disorder, self-efficacy and social support. Bandura (1993) also recognised the characteristics of individuals with high self-efficacy and the characteristics of individuals with low self-efficacy that have been used to identify ten determinants of self-efficacy. These ten determinants were used to create a-priori template codes. Using these codes a template analysis of the data set on support services revealed a major self-efficacy theme of minimising self-doubt that was mainly evident in relation to parenting reassurance. Interviews were conducted at two Australian private hospitals with eight new mothers, 23 clinicians (midwives, obstetricians, nurses and paediatricians) and three hospital maternity administrators. In this chapter a combination of the new mothers’, clinicians’ and administrators’ experiences most commonly pertained to the maternal self-efficacy determinant of maternal self-doubt in relation to parenting reassurance. Parenting reassurance was discussed by participants in terms of *in-person peer-support groups*, *online peer-support groups*, as well as *online parenting information*. Women explained the advantages of these forms of support to reduce parenting self-doubt. Reducing parenting self-doubt facilitated maternal self-efficacy, which may ameliorate the risk of a mental disorder occurring. In contrast clinicians and administrators explained perceived disadvantages of these forms of parenting support.

### **7.1 Peer-Support Groups**

Membership of peer-support groups, known as mothers’ groups, provided women with a connection to other mothers in similar situations. The women respondents described benefits, or advantages, of peer-support groups were shared parenting experience, normalising new parent situations and support

from other new parents. However, the clinicians voiced concerns that the tendency to compare babies and, at times, the dishonesty in the group about baby development that can occur may reduce parenting confidence and the development of maternal self-efficacy.

Shared parenting experiences were seen by the women as a benefit of peer-support groups. In particular, Sarah explained that sharing similar issues helped her to not feel alone; that she was with other people in similar situations.

... getting to know people who were going through the same things at the same time, in that, you know, you're not alone in motherhood. (Sarah)

Sarah emphasises the importance of shared experience that have contemporary relevance. Sarah developed a comradery with other women that enabled her to feel accompanied on her parenting journey.

Sharing similar parenting situations was considered advantageous by the women. Emma explained:

... it gives you a good opportunity to meet other people who are in the same situation as you. (Emma)

Peer support groups provided women with reassurance on a variety of parenting issues. For Jessica, the issues that she found helpful to share included: sleep, physical health, feeding and baby development.

Well, it [peer-support group] is all the people going through the same things; sleepless nights, sore nipples, breastfeeding, baby being fussy. (Jessica)

Jessica highlights the element that made the group of value for her: 'all the people going through the same things'.

Some of the clinicians voiced concerns regarding the sharing of maternal experiences not being fully disclosed by the group members. A lactation

consultant explained that due to the 'secrecy' of parenting, women may exaggerate the quality and quantity of baby sleep leading to unrealistic expectations of infant sleeping patterns:

... it can be like the lady today who said; 'all the babies in the mother's group were sleeping through the night.' I said; 'no, they're probably not.' All that secrecy of parenting ... what I'm willing to tell and show versus the reality - what really is happening in that house ... (Lactation Consultant 1)

This 'secrecy of parenting' can provide a distorted view of motherhood and cause women to lose confidence in their abilities as a mother and develop feelings of guilt that they are not as competent as other mothers.

Administrator 1 shared concerns by explaining that peer-support groups may also have disadvantages such as shared experiences leading to doubt:

Peer support is a double-edged sword. ... it can be wonderful but sometimes you can compare yourself and then find that you're being super critical to yourself. Maybe the mum next to you has this great routine and this baby who seems to just fall into routine, and everything is going smoothly for them - while you're so tired you are using matchsticks to keep your eyes open and wondering what you've done wrong. So I think it can be wonderful but can also ... sometimes maybe ... reduce confidence. (Administrator 1)

This comment highlighted a potential negative aspect of peer-support groups wherein comparison to other women may affect parenting *confidence*. The administrator highlights the potential for women to be *super critical* of themselves and *wondering what you've done wrong*. For some women this can compound their feelings of failure and incompetence as a mother.

The above comment is countered by the positive view provided by the women as they reported that membership of the mothers' groups offered an authentic

experience. In this example, Amanda explained that she felt the accounts provided by peer-support group members were honest.

... you're living and breathing it and theirs are very honest accounts.  
(Amanda)

Amanda's tone of voice suggested that she was passionate about the sharing of these important experiences. Despite the concerns of clinicians and administrators, the women in this study explained that peer support groups were advantageous to new mothers.

Peer support groups gave women an opportunity to normalise parenting issues. Lauren explained that she didn't feel that her situation was so unusual when she heard the stories of other mothers.

And just hearing what other mums are going through, you know, I feel normal, I don't feel like I'm the only one in the whole world going through this stuff. (Lauren).

Participation in a peer-support group provided reassurance and supported parenting confidence for Lauren. Parenting reassurance may ameliorate parenting self-doubt and increase maternal self-efficacy. Through sharing their experiences there is the potential for the women to be motivated to seek additional health advice and thus develop confidence in their ability to care for their baby.

Some of the clinicians agreed with the positive contribution of peer support group. In one focus group the nurses and midwives agreed that, as early as during the postnatal hospital stay, the isolation of single rooms prevented women from feeling normal through the lack of sharing with other mothers.

The problem is that all these women are in rooms on their own, ... they don't realise that everyone else is going through the same thing. (Midwife 2)

Normalising mothering experiences is a common thread in many of the mothers' responses. This normalising potentially allows the women to start to develop their sense of self-efficacy, thereby enhancing the likelihood for sustained positive mental health outcomes.

One administrator was also supportive of the normalising effect that peer-support group provided.

... it normalises your experience ... you're not the only one who maybe is being faced with some challenges that are really affecting your confidence or making you doubt your parenting abilities. To be able to feel comfortable enough and safe enough, to have that discussion and then learn that actually you're not the only one ... can be terribly reassuring and can really help you feel okay, so it's not me doing everything wrong, this is just ... the first year of life with a newborn baby.... (Administrator 1)

In a previous quote this administrator provided cautionary words about the value of groups, while in this quote she provides a more positive assessment of the value of groups for new mothers. The words used of *feel comfortable enough and safe enough* reflect essential elements for the ongoing success of a group.

The reassurance of social connection was discussed in regard to peer-support groups. This linking was described by Amanda.

I just felt like I had a group of girls ... going through the same things as me. And they were local and supportive ... you immediately have a group of people that you've got a very common connection (Amanda)

Of interest is the use of the word *immediately* and *common connection* these two characteristics of groups show the potential power of coming together with others who are having similar experiences.

This theme also describes a gap between how women believed peer-support groups provided parenting reassurance and the doubts that clinicians and administrators felt. Some of the clinicians described mothers' group as both beneficial and detrimental; that they may increase or decrease self-doubt. This midwife explains an advantage of community mothers' group as providing social support. She then raises the concern that comparison of babies can be a disadvantage of mothers' group as women may base expectation of their baby on other mothers' experience or babies' behaviour.

... in the community they are very quickly put into a mothers' group. Which can be a really positive thing for friendships and ... socialising, but the negative of it is they are comparing babies. (Midwife 8)

A belief that women tend to compare their babies was a common thread within the clinician interviews. Although clinicians acknowledged comparison as a negative aspect of peer-support groups, a counter argument could be formed that making a comparison may prompt a mother to take critical action if she felt that her baby was not reaching the same milestones as other babies. This action could result in early identification of developmental delays and access to early intervention that may improve developmental outcomes.

The administrators described benefits of peer-support groups. Administrator 2 explained the advantages of shared experience and normalisation that was reassuring for new parents.

... networking is very supportive for mothers, that they don't feel alone. That if they have some issues, they realise that other women are going through the same issues. I think that makes it a bit more normal, that this isn't an abnormal situation. I would definitely encourage small groups, getting the right people together, so if they're first-time mums, have the first-time mums together ... (Administrator 2)

This administrator also noted that the more similar the experience, the greater the benefits for the women.

## 7.2 Online Peer Support

Participants use the term of 'online support' to describe internet access to online networks that enabled them to access information and communicate with other users via the world wide web. For this study the term 'social media' includes websites and computer programs that allow people to communicate and share information on the internet using a computer, tablet or mobile telephone application (app) to create and share content or to participate in social networking. Social networking, such as 'Facebook', enables users to share text, photographs, video and messages. Participants use the term 'online forum', which is a discussion group that allows participants with common interests to exchange open messages, or posts. The internet was discussed by participants in regard to parenting information. Using an internet browser, or software application, parents can search, find and display websites on the world wide web (examples include *Google Chrome*, *Safari* and *Internet Explorer*). Women described that support and parenting information obtained online gave them a feeling of reassurance.

The women in this study explained that online peer support groups offered the same benefits as face-to-face peer support groups, with four added benefits: convenience, immediacy, anticipation and a wider range of advice. Convenience was apparent in that women could access online peer support at a time that suited them and their baby, that was not imposing on others. The online peer support benefit of immediacy was direct and instant access to information and support that was 'in the moment' or as needed. The third benefit of online peer support was that the pre-emptive nature of this form of support meant the women could maintain anonymity, while accessing support or information, without the pressure of having to ask for assistance or feeling judged about not having the perfect parenting experience. The final additional benefit that women disclosed was access to a wider range of advice from other parents with a variety of cultures or backgrounds. Women presented a positive view that online support facilitated social contact to normalise their experiences and provide reassurance. All of the women interviewed for this study mentioned

benefits of online support as providing a convenient way to problem solve that reduced parenting doubts and concerns.

Women who shared their online peer support parenting experiences felt that the anticipatory guidance information provided reassurance that helped them to feel prepared for their child's next developmental or parenting stage. Lauren found that the post, or message, published by other parents in one online forum were very similar to her own parenting issues.

... there's been posts that people put up there that I sort of almost could have done myself ... reading the posts and seeing what mothers are going through and things that could happen to me down the line and stuff, just being prepared and stuff, for things that may happen (Lauren).

This online support helped Lauren to feel prepared for future parenting issues that may occur, which she found reassuring. Importantly, Lauren acknowledges the near parallel to her own mothering experiences *posts that people put up there that I sort of almost could have done myself*.

Online support also enabled women with similar backgrounds or common interests to communicate, acquire anticipatory guidance that enable the anticipation of future issues, pre-empt help-seeking behaviour and gain access to a wide range of others' solutions. For some women having a similar background or a shared interest increased the value of the online support. Melissa was a medical doctor and she was very enthusiastic about being part of an online forum whereby all members were expectant or new mothers and medical doctors.

... the one that I actually find the most useful is, there's a Medical Mums and Mums-To-Be Facebook group. So it's only for doctors ... it's a closed and private group, you have to show your Medical Registration to be approved and you have to be invited by another member, um, and it's fantastic, I mean, people talk about all sorts of things in there, from what car do you think I should buy, to my child has got this rash ... (Melissa)

Melissa found that being part of an online group with a shared interest offered useful advice. Additional advantages for a medical doctor may have been increased value of opinion from other medical doctors and reduced expectation, that non-medical parents may have expectations that they would have all the answers about babies and matters related to being a mother because they were a doctor.

The administrators explained that social media is a growing part of the fabric of a new mother's life and plays a significant role in facilitating relationships and providing information. This administrator was enthusiastic regarding the convenience of support through online forums, such as being able to connect despite inclement weather or unsociable hours.

... for a lot of people the thought of having to go out sometimes if the weather is shabby or getting the baby in the car... if they can talk to somebody online in a forum, for 15, 20 minutes some days may prevent people from going into that dark place. So I think that forum would be amazing ... you can use social media 24 hours a day, seven days a week. So if you're up at 2.00am in the morning, if you pop onto your social media there's probably somebody else up at 2.00am in the morning as well. (Administrator 1)

The administrator clearly identified that support via online forums had the potential to reduce the risk for women of developing a mental disorder – *prevent people from going into that dark place*. The value of these forums is that they are not bound by time as there is potential likelihood someone else will be online at the same time as another mother.

### **7.3 Online Parenting Information**

A common thread within the online information provided by the participants was the reassurance of having immediate access to information. However, online access meant that traditional face-to-face parenting education may have less

relevance or value for some women. Nicole explained that since she had already obtained a substantial amount of parenting information online the parenting classes provided by the community nurse were not as helpful as she had anticipated.

The problem is that, [in] this day and age, I'd googled everything already, so I knew kind of most of the stuff already (Nicole).

Nicole's quote provides a direct challenge to clinicians working with parents to develop strategies that support women in a way that they prefer and require. Yet a cautious approach is required to be taken by health professionals as they need to be aware of current parenting information trends that are unsafe for the baby or the mother.

For some women it was reassuring that they did not have to seek help: the online forums pre-empted their questions. Nicole explained that the situations discussed online were so similar to her own that she did not have to ask questions, her information requirements were provided as:

... sometimes you don't even have to ask the question because they are all the same age ... so everyone is going through the same stuff; they're all starting to teeth at the same time, they're all on solids at the same time, they're all getting their immunisations at the same time... Most of the time someone is having the same thing you are, and you don't even need to ask the questions because somebody else has already asked it.  
(Nicole)

Having a group with similar aged babies appears to be an important consideration when joining or participating in an online parenting forum. The commonality of issues may mean advice is provided without the woman having to ask a question.

Women explained that online support offered a wide array of problem options or solutions. Lauren felt that Australian forums connected her with those parents that provided the best support and advice.

... the websites and forums where mums can talk and stuff, Australia wide, and they tell you tips and things and places and stuff and problems that everyone has, again, which has been good (Lauren).

It seems that Lauren was reassured to know that other parents around Australia had similar issues. For Lauren using a national forum provided a wide range of advice.

Some clinicians spoke favourably, and some spoke with reserve or scepticism about social media and explained that technology led to a reliance that prevented the development of self-confidence and that societal pressure increased unrealistic expectations, increasing parenting self-doubt. The paediatrician explained that women's ability to access online forums for support was a positive thing.

If they know that there's places online [forums] ... that they can go to, to not only look for information but then links ... to access help for themselves, then that's probably the best way to go. (Paediatrician 3)

This participant's comment suggests an awareness of the benefits to women of accessing information only sites rather than joining an online forum.

Telephone applications, downloaded to a mobile telephone device, such as 'Facebook', 'Instagram', 'Pinterest', 'Snapchat', 'WhatsApp', enabled women to share information and resources that contributed to parenting reassurance. In this example, an instant messaging service for smartphones was used by Rebecca to gain validation of one aspect of parenting – transition to solid food. Rebecca sent photographs of baby food that she had made to other members of her mothers' group.

... we've got a WhatsApp group with our mother's group, so we sort of all discuss, you know, where our babies are at ... And I've sent out pictures of solids I've made. (Rebecca)

The interactive nature of these social media sites enables women to interact – sharing photos and experiences that provide vicarious parenting experience and support maternal self-efficacy. Through sharing experiences women develop their self-efficacy as mothers.

This paediatrician stated his belief that women prefer to find their own information.

This is just the generation... where people find their own information.  
(Paediatrician 3)

In part this could be an acknowledgement of the digital literacy of the mothers and their competence with the use of digital technologies.

Administrators were largely accepting of online support. They explained that social media was part of the life for this generation of women. One administrator described that connection online is a common occurrence in society at this time.

... it's just the social media world that we live in now. Everybody is very used to that. I think this age group and onwards will be very used to connecting up with people. Maybe that's how they met their partner in the first place, so they're very used to connecting up with people through social media. (Administrator 1)

This quote suggests that the administrator is aware of the use of social media for connection and the acceptance that this is a part of everyday life.

Another administrator explained that the internet is used by young people in many aspects of life.

...it's just a generational thing that the young ones go online; like Trip Advisor when people are going on holidays, or to book restaurants and so forth...it's just an extension of that. ... I think that is just social media and the way people are - the younger generation are moving more towards that. (Administrator 2)

Within the quote above, Administrator 2 highlights the internet as an accepted everyday tool that is used by young people to manage their lives. Her tone of voice and the words she uses are of acceptance. As social media usage has continued to increase in this demographic, health professionals are pressured to embrace technology. This acceptance is repeated in the following quote by Administrator 1 as she explains that everybody is used to the Internet for information:

... everybody is now very used to going to the Internet to find out information. So we wanted to be a part of that and we wanted to have that available for our mums. (Administrator 1)

The administrator is referring to parenting information that is available on the hospital website. In this quote the administrator her acknowledgement of the importance of this way to provide information came through with her enthusiastic statement: 'we wanted to have that available for our mums'.

The women did not mention any disadvantages of online peer support, however the clinicians and the administrators voiced concerns of pressure, privacy, intuition, and quality of information. There was concern among clinicians that information mothers found online may be misleading and result in unrealistic expectations. The counterview is that this is where women turn to peers for parenting support. This obstetrician felt that the Internet causes a burden for new mothers, as there is increased expectation regarding appearance, mode of birth and baby feeding.

I have noticed ... the overwhelming sense of societal pressure on mothers' around ... expectations that they are meant to look perfect, to go back to work straightaway, for the baby to come out vaginally and to breastfeed.

All that stuff is on the Internet - which I find very distressing and alarming. And I think it's actually gotten worse since I became an obstetrician. I think their expectation [increased] ... there's so much information readily available on the internet from all these so-called experts that women have easy access to criticism. (Obstetrician 5)

The obstetrician felt that the internet caused pressure and that ready access to the opinion of other people could lead to the women to being criticised online, while also highlighting that this mode of information-seeking by women was a concern. An alternative way of interpreting this may be that clinicians felt disempowered as a provider of information or usurped from the position of 'expert' when women are in control of access to information. The breaking down of this 'gate-keeping' function may feel threatening for some clinicians, eroding their sense of professionalism.

This administrator was cautious about the hospital providing an online forum, suggesting women's privacy may be at risk and that staff resources would be required for ongoing monitoring.

... they maybe aren't as concerned about the privacy of it. Until proven otherwise as maybe somebody in an older age group might. Again, they're just so used to it, this is just a normal thing. But privacy could be an issue [with a hospital online forum] ... I think the ongoing concern with an online communication is there somebody in charge of it? Who is scrutinising it? (Administrator 1)

Although women found online forums provided support to be provided through safe social interaction with strangers, for one administrator the issue of confidentiality was a concern. This suggests barriers to the hospital providing an online forum may be lack of understanding regarding online privacy, concern about duty of care, and lack of staffing resources.

Clinicians discussed the disadvantages of telephone applications. One nurse explained her concerns that using mobile telephone applications for parenting

reassurance, rather than paying attention to the baby, restricts the development of 'parenting' and contributes to maternal self-doubt.

The parent today has to look at an app., so they can't tell me how many feeds they had yesterday ... they don't get to build confidence because they're relying on so many things to tell them that they're doing okay and that interferes with instinct. (Nurse 10)

As the nurse explained her belief, that the mother's reaction to infant cues is to check with a telephone application rather than draw on their own experiences, other members of the focus-group nodded or vocalised their agreement. An alternative analysis could be that the woman is problem solving in a contemporary way if she has been using the telephone app to record prior infant cues and her own observations. This process may assist her to increase her sensitivity to her infant's cues. An alternative view is that the clinicians are not providing adequate information in a way that mothers can understand and learn the necessary skills. This lack of information then requires a woman to seek out information in a way that she can understand and translate into caring for her baby.

The rapid development of new mobile telephone applications was seen as a challenge by one administrator. This administrator described the burden of retaining up-to-date knowledge.

There are a million and one apps out there. It is a challenge to direct people to the right ones and I think new ones pop up all the time. So how you can keep pace with that? (Administrator 1)

While the administrator appears to refer to women's inability to keep pace with the number of new parenting apps; this concern could also be related to being able to discern which parenting apps provide safe advice. In either case the administrator assumes the hospital or the clinician have responsibility for directing the woman to suitable apps. The attributing of responsibility was not evident in the women's responses.

Clinicians also speculated on the quality of information that women may access. One paediatrician while supportive of women accessing information voiced concerns about the quality of the information that women access through the internet.

If there was good quality information out there for families, I think that it actually would be quite helpful for them. And for us to provide how they can find that good quality information, so then they're not going to be Googling, they're going to have good resources online to go to. (Paediatrician 3)

He provides a solution of 'for us to provide how they can find that good quality information'. Within this statement the paediatrician is accepting responsibility that the hospital needs to provide these online information resources.

This administrator warns that there is a lot of information online and that in parenting and childbirth education classes women are encouraged to be selective of the information that they access.

In childbirth education classes we do alert our expectant parents to the fact that there is a lot of information online but to maybe try and be selective in what they read because there can be a lot of dis-information out there. (Administrator 1)

The administrator refers to the expected practice within the classes of warning the mothers about the risk of misinformation and the importance of being selective. The administrator did not expand on her concerns or if guidance was given to the class participants about how to be selective with the information they may find on the internet.

The women recalled some clinicians provided them with information about online support services. Web-based resources were provided to Lauren from the community nurse.

... [nurse] did help me with, even just like websites and things to look at and try, obviously more with food, she gave us quite a lot of websites to check out. (Lauren)

Lauren stated that the nurse 'did help me'. In saying this Lauren implies that this help was a combination of face-to-face assistance as well as information about appropriate websites and how to make decisions about the found information.

## **7.4 Summary**

Women described peer-support groups as providing parenting reassurance through sharing experience, normalising situations and making social connection. Although clinicians voiced concerns that peer-support groups may lead to dishonesty about their maternal experiences and comparing babies that has the potential to reduce parenting confidence, administrators were hopeful about the benefits of these groups. Women explained that online peer-support groups provided them with the same benefits as in-person peer-support group as well as additional benefits of convenience, immediacy, pre-empted questions and increased choice of reassurance through the wide range of advice from people from varied backgrounds. Clinicians and administrators voiced concerns that seeking parenting reassurance through online forums increased pressure that women felt that they should have a 'perfect' parenting journey, that other parents provided misinformation, woman's privacy was at risk and use of online devices may interfere with parenting intuition.

As information technology changes constantly the rapid introduction of new online products mean clinicians and administrators felt that it is problematic to keep track. Women believed that peer-support groups, both in-person and online, and online parenting information provided parenting reassurance that enhanced maternal self-efficacy. Clinicians remained sceptical about these forms of reassurance and undermining these forms of parenting reassurance may increase self-doubt and challenge maternal self-efficacy and increase the risk of mental disorder.

## Chapter 8 – Discussion and Conclusion

Changes upon becoming a mother increase the associated risk of developing a mental disorder that has the potential to negatively impact the woman, her baby, the family and society. The two-tier Australian health care system (public and private) and fragmentation of support services across the perinatal period increases the risk of developing or exacerbating a mental disorder for women who give birth in a private hospital. This study aimed to describe support services, within the parameters of maternal self-efficacy and perinatal mental health, for first-time mothers who gave birth in a private hospital.

Within the integrative review of the literature, that included both qualitative and quantitative studies, mental disorder was the most common outcome measure of early parenting support services. However variations existed between studies regarding the fidelity and the life-stage timing of the service provided and in the specific outcome measurement. This information was used to develop the research objective that examined risk of mental disorder and then to explore the increased risk in regards to early parenting support services. Based on Triadic Reciprocal Causation, from Bandura's Theory of Human Agency (1997), the concepts of social support, self-efficacy and mental health provided a framework for the study. The mixed methods study design was used to both determine and explain risk of mental disorder. To understand the relationship between postnatal mental disorder, social support services and self-efficacy firstly the risk of postnatal mental disorder was quantified statistically. The information obtained from this analysis then prompted qualitative exploration of self-efficacy within information on support services in order to explain the statistical analysis. The first phase, the population data analysis, was able to determine a greater risk of mental disorder for the women who gave birth in a private hospital to the women who gave birth in a public hospital. The second phase included both thematic and template analysis of participant experience to explain why there was an increased risk. Interviews were conducted at two Australian private hospitals with eight new mothers, 23 clinicians (midwives,

obstetricians, nurses and paediatricians) and three hospital maternity administrators. Thematic analysis based on the literature, provided participant experiences of early parenting support services. The data set was reanalysed based on the premise that, for these women, maternal self-efficacy may be unsupported or undermined by the use of support services. Based on self-efficacy theory, an a-priori template was developed to test this premise and interpret specific examples of maternal self-efficacy in order to explore the general concept of maternal self-efficacy in support services. This chapter discusses the results and findings in relation to other studies, recommendations for development of support services for women who give birth in private hospitals, as well as limitations and suggestions for future research.

## **8.1 Early Parenting Support Services Outcome Measures**

An integrative review of the literature determined eight overarching domains used to measure outcomes of support services provided during the perinatal period. These were: mental health, maternal self-efficacy, stress, fatigue, parenting skills, intimate partner relationships, physical health and infant outcomes. The outcomes most commonly measured were from the domain of mental health. The mental health domain included diagnosis or symptoms of mental illness; depression, anxiety and perinatal common mental disorder. The mental health domain also included stress as a measure that may indicate risk to a woman's mental health and self-efficacy as a measure of protection for mental health. The information that a measure of mental health was used as an outcome of support services was then employed to define the research objectives: was there a difference in the incidence of mental disorder for women who gave birth in a private hospital versus women who gave birth in a public hospital? And if so, was this related to support services?

## 8.2 Results Phase 1 – Risk of Perinatal Mental Disorder for Women who

This *Support Services Study* has demonstrated that in the state of NSW the risk of hospital admission in the postnatal year with a primary diagnosis of mental disorder was significantly higher for women who gave birth in a private hospital than for women who gave birth in a public hospital (rate = 2.54%, compared with rate = 1.68 %, 95% CI = 1.61 – 1.75 %). This sample was representative of 99% of first-time mothers who gave birth in the state of NSW, in both private and public hospitals (Health Department NSW 2010). This result may be relevant to other states in Australia, as the percentage of women who gave birth in a private hospital in other states was comparable to NSW (Government 2019). The dependent variable – postnatal hospital admission with a primary diagnosis of mental disorder – was relevant to ascertain which women were affected by a mental disorder that was severe enough to require hospitalisation (Xu et al. 2014). The independent variable - hospital type where the woman gave birth - was relevant to make comparison between private and public sector care. These linked data, collected between January 2003 and December 2009, were the most recent linked data available for analysis. A study by Xu et al. (2014) described that admission for a mental disorder during pregnancy, childbirth and the puerperium has continued to increase and a review of the most recent data from Australian Institute of Health and Welfare showed that 215 of 309,142 women who gave birth required hospital admission for mental disorder during pregnancy, childbirth and the puerperium, indicating that perinatal mental disorder remains an issue in Australia (Government 2019).

Research studies by Shorey et al. (2014); Shorey et al. (2015); Shorey et al. (2019) and Leahy-Warren, McCarthy & Corcoran (2011b) have already demonstrated a link between maternal self-efficacy in early parenting support services and risk of developing a mental disorder. This *Support Services Study* aimed to describe maternal self-efficacy in support services for women who gave birth in a private hospital. The experiences of new mothers, clinicians and

administrators were explored and integrated to describe maternal self-efficacy in support services, including assessment of risk of a mental disorder.

### **8.3 Perinatal Assessment of Risk of Mental Disorder**

Assessment of risk of a mental disorder using regular psychosocial assessment is now identified as an essential clinical practice in perinatal care (Austin & Highet 2017). This assessment enables introduction of interventions that reduces the risk of a mental disorders and assists the woman to improve her mental health during the perinatal period (Austin & Highet 2017). This study identified that for women who gave birth in a private hospital, a psychosocial assessment was not provided as part of the routine perinatal care. When assessment was provided, there was no evidence that it was in the form of a comprehensive psychosocial assessment but only as a depression screening, using Edinburgh Postnatal Depression Scale, or as a question during routine antenatal appointment. Some of the clinicians expressed their belief that a comprehensive assessment should be offered to all women as part of routine care. Other studies on perinatal assessment of risk of a mental disorder also found that women who gave birth in a private hospital were less likely to be provided with this service (Reilly et al. 2013; Reilly et al. 2015).

Additionally, assessment of risk of mental disorder was not coordinated between hospital and community care providers. Lack of coordination between hospital and community perinatal services was also found in previous studies (Mayors 2014; Psaila, Kruske, et al. 2014; Psaila, Schmied, et al. 2014; Psaila et al. 2015; Schmied et al. 2016). However, in this *Support Services Study* clinicians and women were familiar with mental health resources suggesting that current practice, rather than a lack of mental health resources was the reason that assessment was not part of routine care. Further investigation would be recommended to determine the barriers of routine psychosocial assessment for women who gave birth in a private hospital.

## **8.4 Findings Phase 2 – Maternal Self-Efficacy and Infant Feeding Support Services**

Within this *Support Services Study* participants' experiences most commonly pertained to two self-efficacy determinants: women set their own goals on infant feeding and women reduced self-doubt through online parenting reassurance. Infant feeding and online parenting will be discussed in relation to the wider literature.

### **8.4.1 Infant Feeding – Unprepared and Unsupported to Set Own Goals**

Infant feeding is a key task of motherhood that goes beyond the provision of nutrition. In most instances it is one of the first interactions that a mother has with her infant and forms the beginning of an enduring relationship. If a woman is able to gain confidence in her ability to feed her infant and enjoy the process it can be anticipated that her level of maternal self-efficacy will increase (Leahy-Warren et al. 2014). A systematic review of support for first-time parents' concluded that early provision of realistic information on parenting increased the likelihood of a more positive transition to parenthood (Entsieh & Hallström 2016). However, this *Support Services Study* demonstrated that some women who gave birth in a private hospital felt unprepared and unsupported for infant feeding.

### **8.4.2 Infant Feeding – Unprepared**

Some of the women identified feeling unprepared for infant feeding and expressed their surprise at the skill and time commitment that breastfeeding required. Some of the clinicians within this study described women as having unrealistic expectations and that they were unprepared for the realities of breastfeeding. Women described their assumption that since breastfeeding was 'natural' then the process of breastfeeding would be easy and, as such, they felt unprepared when they encountered breastfeeding problems. Feeling unprepared for breastfeeding was also a common theme in a synthesis of ten

studies on breastfeeding (Burns et al. 2010). This synthesis also determined that women had anticipated breastfeeding would be automatic and easy and so were surprised when they encountered breastfeeding problems and disappointed when their experience was negative (Burns et al. 2010). In this study women explained that the unrealistic expectations of breastfeeding came from a lack of information about the difficulties involved in breastfeeding as well as a lack of understanding of the benefits of breastfeeding support services, such as classes and consultations. Other studies on the breastfeeding experience of women supported these findings and showed that women felt unprepared for motherhood and wished they had been more informed both about breastfeeding and about support services (Buultjensa et al. 2017; Martin et al. 2014). A mixed methods study by Buultjensa et al. (2017) investigated experiences of perinatal health service education through a survey of 189 Australian women. Although almost two thirds of these women gave birth in a public hospital the findings were very similar to the *Support Services Study*; women felt unprepared for parenting and wished that they had been better informed about infant feeding and support services. Martin et al (2014) conducted focus groups, of 58 women, recruited through urbane obstetric clinicians and a teaching hospital in New York City. Their findings also supported the *Support Services Study*; women felt unprepared for the postpartum and for parenting and described that prenatal preparation could have been more beneficial.

This study demonstrated that unrealistic expectations prevented women from setting realistic infant feeding goals. Concern about unrealistic breastfeeding goals was also a common theme in the Burns et al. (2010) meta-ethnographic synthesis of 17 studies on women's experiences of breastfeeding. One Australian study on the transition to motherhood, that employed indepth interviews, explained that as the transfer of maternal knowledge on infant feeding may not be possible without the somatic experience of infant feeding, then information provided prior to the birth of the baby may be ineffective (Fowler 2002; Fowler & Lee 2004). The authors suggest that infant feeding support provided in the first hours and days after birth may enable women to

move from an abstract concept of parenting to a concrete, embodied experience (Fowler & Lee 2004). Although women may be provided with information and support on breastfeeding, their expectations may remain unrealistic, therefore setting realistic goals would be less likely and maternal self-efficacy would not be supported if they were unable to attain their own infant feeding goals.

### **Infant Feeding - Unsupported**

Women in this study expressed that they felt unsupported in making their own decisions on infant feeding and that they were pressured by clinicians to breastfeed. This study depicted women felt that clinicians demonstrated a lack of respect for their infant feeding decisions. This was also determined in a study of breastfeeding where women felt they were not encouraged to make their own decisions on infant feeding as only breastfeeding was valued by the clinician (Sheehan, Schmied & Barclay 2009). The perception of 'pressure' within clinicians' discourse to breastfeed was seen in a study of women who felt that they were: pushed to breastfeed, that clinicians were identified as rude or had unhelpful attitudes and that clinicians lacked respect for women's choices (Burns et al. 2010). The perception of pressure to breastfeed may stem from traditional 'breast is best' models of midwifery care, a zealous interpretation of the Baby Friendly Hospital Initiative (BFHI) or traditional clinician practice that is underpinned by the expert model of care, rather than the more contemporary 'parenting in partnership' model of care. Women who believe that clinicians either apply pressure to breastfeed or do not respect their infant feeding decision-making may find it difficult to set their own infant feeding goals and this may undermine maternal self-efficacy. This is supported by an Australian study of 255 first-time mothers that investigated the correlation between social support, self-efficacy, expectation and adjustment and found that more realistic expectations increased self-efficacy (Mihelic, Filus & Morawaska 2016).

Both of the research sites in the *Support Services Study* were committed to the BFHI and the promotion of breastfeeding. The initiative, launched in 1991 by

UNICEF and the World Health Organisation, recommended that infants should be exclusively breastfed for six months (World Health Organization 2019). The BFHI provided hospitals with background information, staff training, monitoring tools, and awareness material for hospital staff to support new mothers in breastfeeding. However, a meta-ethnographic study by Schmied et al. (2014) demonstrated that BFHI was seen as 'unfriendly to mothers' in three of the seven studies. One study explained that use of the ten steps to BFHI as a checklist of tasks to be accomplished may lead clinicians to a rigid adherence that may cause women to feel pressured to breastfeed (Schmied et al. 2014). This suggests that the individual needs of women may not be met if the BFHI guidelines are implemented as rules. Fowler & Lee (2004) explained that the dynamics of knowing and learning suggest breastfeeding support should be a complex, multidirectional communication based on 'cultural and relational' understandings. However, when clinicians assume the role of an expert knowledge provider, the result is prescriptive unidirectional text from the clinician to the mother (Fowler, McMahon & Barnett 2002). As both research sites in this study were committed to BFHI and women who gave birth at these sites described feeling pressure to breastfeed, this suggests that for some clinicians the BFHI provided rules that were required to be followed. Further study of clinician belief and practice would be required to determine if this was a cause of clinician 'pressure' to breastfeed. Women in this study explained that negative experiences with breastfeeding were exacerbated by guilt by not breastfeeding or when they ceased breastfeeding. The same theme of 'feeling guilty' was associated with: depriving the baby, giving up too easily, not trying hard enough, being selfish and feeling like a failure were reported in other studies on breastfeeding (Burns et al. 2010).

In conclusion, when women felt unable to set or achieve their own infant feeding goals their maternal self-efficacy was undermined and they were at increased risk of developing a mental disorder. Another Australian study suggested that the provision of woman-centred preparation for parenting, that includes anticipatory guidance and parenting in partnership to provide a strength-based, wellness approach to infant feeding may support maternal self-efficacy and

enhance mental health (Fowler, Rossiter, Bigsby, et al. 2012). Infant feeding information and support that enable a woman to explore infant feeding options that best suit her situation, understand the implications of the decisions, and set her own realistic goals would assist maternal self-efficacy and ameliorate the risk of mental disorder.

#### **8.4.2 Parenting Reassurance and Maternal Self-Doubt – Peer Support Groups**

In this *Support Services Study* parenting reassurance was most commonly described in terms of peer-support groups. Women explained that peer-support groups allowed them to share similar parenting experiences, which normalised their new life as a mother. Women also believed that peer-support groups facilitated social connections, reduced isolation and increased their social support network. These findings were supported by other studies of new mothers. A recent systematic review of early parenting support demonstrated peer-support groups were important to women and contributed to a positive transition to parenthood (Entsieh & Hallström 2016). Peer-support groups were found to provide a supportive, sharing environment where mothers felt confident to make decisions that met their own individual needs, preferences and cultural knowledge about birth and parenting (Demecs, Fenwick & Gamble). Mothers trust the shared experience of other mothers as significant source of parenting information (Barnes, Senior & MacPherson 2009; Barnes et al. 2010; Berkule-Silberman et al. 2010). Interaction with mothers who have similar aged children provides an understanding of the 'range of normal' (Hall & Irvine 2009). The findings from this study suggest that peer-support groups were important in care of the current cohort of women giving birth. In another study of an early parenting support service program the authors went even further to demonstrate that peer-support groups were a necessary component of contemporary care for new mothers (Barnes et al. 2010).

In the *Support Services Study*, although none of the women spoke in negative terms about peer-support groups, some of the clinicians voiced concerns that

peer-support groups led to comparing babies that inaccurately portrayed baby development and reduced parenting confidence. This was supported by one study that found fear of judgement and cliques may have had a negative impact on interactions between new mothers during information exchanges and for normalising experience (Hall & Irvine 2009). However, the limited information on the negative consequences of peer-support groups suggests that parenting peer-support groups provide parenting reassurance that facilitates maternal self-efficacy.

Development in information technology has propelled the development of electronic health, known as 'e-health' or 'telehealth', that provide both social support and information support options for health care consumers. Through internet sites and mobile telephone applications, social media spaces such as Facebook, Twitter, Instagram and YouTube, provide communications between e-health consumers and providers. Peer support can be received through posts, updates or comments that contain either advice or experiences, in text, image or video format. Online peer support groups were described by women in this study as providing the same benefits as in-person peer-support plus additional benefits of convenience, immediacy, anticipation and a wider range of advice.

There is emerging evidence that electronic perinatal mental health support, such as apps and online forums, address the changing technological requirements of this demographic of new mothers and that these are effective in prevention and treatment of perinatal mental disorders (Danaher 2012). It has been established that this demographic, termed millennial mums, average eight hours a day online and they are efficient and targeted in searching for information (Australian Bureau of Statistics 2014). The term 'Millennial' has been used to describe the cohort of people born between 1977 and 1994, accounting for approximately one quarter of the Australian population (Australian Bureau of Statistics 2016). 'Millennial Mums' is a term used to describe women in this age group who are at the life stage of having children (Australian Bureau of Statistics 2016). The 'Millennial Mums' are described by

Rainbow & Stewart (2014) as grouped by date of birth and shared experiences of being parents they are culturally diverse and make up a diverse range of market segments. The behaviour, beliefs and knowledge of this cohort are shaped by new technologies who demonstrate an affinity towards social media, sharing their interests and receiving feedback. These women may be less affected by traditional advertising, preferring instead to build relationships, connect and engage through authenticity and technology. The increased usage of the internet for social interaction and information provides new mothers with a new arena to engage with others in similar circumstances, normalise their new situations and obtain mother-to-mother support through social connection (Davis 2015). Many new mothers preferred to access parenting reassurance through online forums and social media than through traditional means (Davis 2015). In terms of immediacy and convenience, internet support provided accessible information that was unconstrained by time or location (Niela-Vilen 2014). Critically, Niela-Vilén et al. (2014) cautions that internet-based peer support supplements professional support and does not replace it. Depending on a woman's level of self-efficacy and her health literacy abilities clinicians do play an important role as illustrated within this study in clarifying information found on internet, rectifying misconceptions or unsafe parenting practices, assisting with problem-solving and providing reassurance.

Alongside online peer support, participants in this study discussed online health information. Women participants were positive in their description that other new mothers were a good source of parenting information. Other studies also found mothers identified other mothers as information sources and that peers were effective at providing parenting information to prepare women for their parenting journey (Davis 2015; Hall & Irvine 2009; Khoo et al. 2008). Online health information enabled consumers to take responsibility for their health; feel fulfilled when information expectations are met, have confidence in their own discernment and be empowered by the sharing of information (Mayoh, Bond & Todres 2012). Digitally based EPS, including telephone-based education sessions and mobile telephone application, were established as improving both

maternal self-efficacy, perceived social support and mental health in a Singapore based study of 236 parents (Shorey et al. 2019).

Clinician and administrator participants in this study voiced concerns that online peer support may: increase pressure for women to have a 'perfect' parenting journey; provide poor quality information; compromise the woman's privacy; or interfere with parenting intuition. Furthermore, clinicians and administrators voiced concern that these groups are difficult to monitor due to the ongoing changes in social media that are particularly engendered through technological change. Interestingly, this placed the clinicians as self-appointed gatekeepers to what they perceived as appropriate knowledge for women to access. While providing accurate information is a significant role for health professionals it is unrealistic to believe that sources of parenting knowledge via the internet can be contained; rather health professionals role should actively seek out evidence based internet sites to recommend to women and assist women to critically assess information they are provided with through the internet.

Further research into women's preference for online parenting informatics may assist development of online parenting support services provided by the hospital. The support service formats that are acceptable to these 'millennial mums' included in-person peers support and online peer-support groups. The women's interview responses conveyed their positive thoughts on the three most commonly discussed ways that they gained parenting reassurance; peer-support groups, online support groups and online parenting information. Women described that peer support groups, both in-person and online, provided parenting reassurance and reduced parenting self-doubt. Minimising self-doubt supports the development of maternal self-efficacy. In the theme of parenting reassurance it is argued that the facilitation of women's access to parenting reassurance reduced their maternal feelings of self-doubt, facilitated maternal self-efficacy and ameliorated the risk of developing a mental disorder.

We have seen from the findings of this *Support Services Study* and other studies that effective perinatal care requires an understanding of the complexity

of maternal learning (Fowler & Lee 2004). This study is consistent with other studies that suggest the traditional 'expert' model of care may not provide individual, woman-centred care that supports maternal self-efficacy (Verbiest, Bonzon & Handler 2016). The 'Parenting in Partnership' model of care may offer a more responsive and empathetic model of care to support maternal self-efficacy (Fowler, Rossiter, Bigsby, et al. 2012; Fowler et al. 2014). A study by Shorey et al. (2015) demonstrated significant correlation between parental self-efficacy, social support and postnatal depression. From this study of 140 primiparous women the recommendations included incorporating maternal self-efficacy enhancing strategies into all parenting support services to facilitate a smooth transition to motherhood (Shorey et al. 2015).

## **8.5 Conclusion to the Chapter**

The main self-efficacy themes that were identified in this study in relation to support services were issues with breastfeeding support and online parenting reassurance. This suggests that traditional models of support services, based on an 'expert' model of care, may not facilitate the development of maternal self-efficacy – rather it could impede maternal self-efficacy development. A women-centred provision of anticipatory guidance that uses a parenting in partnership model of support services may be more effective in supporting women to set their own parenting goals, find parenting reassurance and accessing support services that suit them in their development of maternal self-efficacy and in turn minimise the risk of mental illness. This study provided evidence that women have many options for support services and that there is no standardised route for perinatal support services within the private hospital system.

## 8.6 Conclusion to the Thesis

Women who gave birth in a private hospital were at greater risk of developing a mental disorder, were less likely to be assessed for risk of mental disorder and the support services that they were offered may not support the development of maternal self-efficacy or ameliorate the risk of developing or exacerbating an existing mental disorder. Within the integrative review of the literature, that included both qualitative and quantitative studies, mental disorder was the most common outcome measure of early parenting support services. However variations existed between studies regarding the fidelity and the life-stage timing of the service provided and in the specific outcome measurement. This information was used to develop the research objective that examined risk of mental disorder and then to explore the increased risk in regards to early parenting support services. Based on Triadic Reciprocal Causation, from Bandura's Theory of Human Agency, (1997), the concepts of social support, self-efficacy and mental health provided a framework for the study. The mixed methods study design was used to both determine and explain risk of mental disorder. To understand the relationship between postnatal mental disorder, social support services and self-efficacy firstly the risk of postnatal mental disorder was quantified statistically. The information obtained from this analysis then prompted qualitative exploration of self-efficacy within data on support services in order to explain the statistical analysis.

The first phase, the population data analysis, determined a greater risk of mental disorder for the women who gave birth in a private hospital to the women who gave birth in a public hospital. The second phase included both thematic and template analysis of participant experience to explain why there was an increased risk. Interviews were conducted at two Australian private hospitals with eight new mothers, 23 clinicians (midwives, obstetricians, nurses and paediatricians) and three hospital maternity administrators. Thematic analysis based on the literature, provided participant experiences of early parenting support services. The data set was reanalysed based on the premise

that, for these women, maternal self-efficacy may be unsupported or undermined by the use of support services. Based on self-efficacy theory, an a-priori template was developed to test this premise, and interpret specific examples of maternal self-efficacy in order to explore the general concept of maternal self-efficacy in support services.

Socioeconomic, employment and educational characteristics do not protect against risk factors for developing a mental disorder therefore women who give birth in a private hospital would benefit from assessment of risk. These women would also benefit from connecting with a range of suitable support services. Information on support services provided in a way that is acceptable to new mothers increases the likelihood that they will access the services potentially contributing to an increase in maternal self-efficacy and reduce the risk of mental disorders. Women who gave birth in a private hospital have increased incidence of mental disorders, were unlikely to be provided with assessment of risk and less likely to be referred to or access support services and interventions that were suitable to their needs to assist in preventing or treating mental disorders. Perinatal care intersects both the public and private health care systems. This research study provides evidence on social support services as the first step to the development of a model of integrated services for private hospitals to improve outcomes for women, their babies and their families. Changes in clinical practice and development of services that support maternal self-efficacy may assist women improve their mental health and reduce the risk of developing a mental disorder for first-time mothers who give birth in both private hospitals and public hospitals.

The findings and results from this study have highlighted the relationship between early parenting support, maternal self-efficacy and perinatal mental health. Changes in a woman's lifestyle or/and her physical and emotional health during the perinatal period may cause stress and this may increase the risk of developing or exacerbating an existing mental disorder. The literature review has established a significant finding that many early parenting support services have been slow to ameliorate the risk of mental disorder, although these

services may measure outcomes of mental disorder such as depression or anxiety rather than outcomes that affect the risk of a mental disorder, such as stress or self-efficacy. The lack of appropriate mental health assessments and interventions provided to women using the private hospital system has been exacerbated by the finding that women who gave birth in a private hospital were at increased risk of developing a mental disorder, compared to women who gave birth in a public hospital. Evidence from this *Social Support Study* suggests that these women are not provided with comprehensive psychosocial assessment of risk of mental disorder during the perinatal period. Although women who gave birth in a private hospital are at increased risk of developing a mental disorder, less likely to be provided with psychosocial assessment during the perinatal period and the support services available may not be supportive of the development of maternal self-efficacy or know that there are simple strategies that may help.

## **8.7 Recommendations on Early Parenting Support Services**

From this study five recommendations are provided. These are summarised in Box 7. The first is development of a Communications Strategy for clinicians on maternal self-efficacy, parenting support services and perinatal mental health. Gaining skills in providing individual, woman-centred care may place clinicians in a better position to help each woman determine her specific support needs at the time that is most useful to her and assist women develop skills in identifying parenting goals that are suitable to her family and cultural needs. To support clinicians to provide woman-centred care would require, in many instances, a reorientation of hospital perinatal support services to a health promotion approach that extends beyond recovery from birth to encompass psychosocial factors to improve the quality of the transition to motherhood. Transition of perinatal support services from an 'expert' model of care' to 'parenting in partnership' has the potential to provide services that are reliable, responsive, empathetic, individualised, respectful and timely. Continuing professional development for clinicians would include provision of anticipatory guidance on infant feeding and infant cues, and relationship and strengths-based

approaches to provision of care. Clinicians would then be able to provide individual care based on the woman's needs and preferences, that is culturally sensitivity and financial acceptability for her and her family.

The second recommendation is the inclusion of Mental Health in all hospital policies that pertain to the perinatal period. This would include a policy that outlined the hospital responsibility in the identification of women at risk through comprehensive, psychosocial assessment services provided as part of routine care for all women, coordinated between clinicians and providing recommendation or referral for women at risk.

Recommendation three is a review of organisational interpretation of the BFHI and infant feeding policies to align with international guidelines that support maternal self-efficacy and mental health of the woman as well as the physical health of the baby. An action research project would determine clinician perception of the BFHI and ascertain if the ten steps are being considered as 'rules' that all women must breastfeed and they must enforce. The action research project would also determine to what extent clinicians base infant feeding support on the woman's infant feeding choice, supporting her to set her own goals and facilitating the development of maternal self-efficacy.

Development of hospital provided online parenting support services is recommendation four. These services may include online peer-support groups through social media platforms as well as health informatics options such as websites, phone apps and telehealth services. And the final recommendation is to assist staff develop skills to support women learn how to assess and critique health and parenting information provided by websites and social media. The development of an online safety checklist strategy to assist new mothers to determine most efficient and effective means of information and support both in the prenatal and early postnatal period would assist both clinicians and women.

## Box 7 – Summary of Recommendations

- Clinician Communications Strategy on maternal self-efficacy, parenting support services and perinatal mental health
- Inclusion of Mental Health in all hospital policies that pertain to the perinatal period
- Review of organisational interpretation on Baby Friendly Hospital Initiative.
- Hospital provided online parenting support services
- Staff digital information assessment skills and the development of an Online Safety Check list

Findings from this study offer evidence for private hospitals to shape service development that may improve clinical outcomes, increase quality of care and provide commercial advantage through differentiation of hospital services in the competitive hospital care market. This study provides hospital management and clinicians with a better understanding of the needs of new mothers and recommendation of a model of social support service that may provide a transferable, scalable opportunity to improve service provision. The alternate strategy, to provide care as usual, may result in clinical outcomes that are lower than industry standard and reduced market share. Perinatal support service development would best be achieved through an action research project that includes representation from all stakeholders; new mothers, their partners, hospital administration and clinical staff, visiting medical officers, local community support service providers, important health funds and any potential government service funders.

Perinatal support could include preconception, prenatal, labour, birth and postnatal services that facilitate maternal self-efficacy development and reduce the risk of mental disorder. Effective support services for new mothers would aim to: work in partnership to support women to set their own parenting goals, facilitate women's access to support services for themselves and minimize maternal self-doubt through reassurance and provision of anticipatory guidance.

Services would include information and support on feeding, sleep and parenting provided through classes, groups, individual appointments and online services. A review of organisational culture would determine family centred services and clinician education and training partnership with new mothers, rather than the outdated 'expert' model of care. Clinician focus on anticipatory guidance at clinics and classes can provide new mothers with information to develop a more realistic expectation of parenting.

## **8.8 Limitations and Future Research**

The findings were limited by the timing of the study. During the gathering of data changes to the Medicare legislation were introduced that required obstetricians to ensure emotional wellbeing support (Australian Government Department of Health 2017). This study did not collect data on change of practice following introduction of this legislation; though there was no evidence that these changes had been implemented at the time of the data collection. However, future research may focus on changes to services and to outcomes for first-time mothers who gave birth in a private hospital. Additionally, future research that includes the examination of documentation of hospital policy and procedure may provide useful information on support services. In this study financial information was rarely mentioned by the participants. Future research could include financial modelling to develop commercially viable support services for private hospitals. The number of participants was limited by the time available to complete the study. Greater insight and understanding may be gained if the women's partners were included; either through interviews or surveys. Also, inclusion of baby wellness measures in future research would acknowledge the voice of the baby and add to the information. Future studies that include information from participants in public hospitals may provide an understanding of why women who gave birth in a public hospital were at lower risk of mental disorder than women who gave birth in a private hospital.

Additionally, research that provided more extensive information on the effect of service timing in relation to infant development and effectiveness of the information provided to new mothers to access the services may improve the

effectiveness of support. As the perinatal period is complex and individuals are multifaceted this research was limited by a single interview with each participant. The participant's retrospective recall may introduce personal biases, although for the women their birth and early postnatal experiences were very recent so this would be less likely, however a longitudinal study would provide further depth to the information. An ethnographic study undertaken through immersion in the field of support services would provide additional information to develop services. Additional sources of information would include case studies of new mothers who had experienced multiple issues during the perinatal period, such as the experiences of Nicole and Lauren (Chapter 6). The interview questions were limited to support services, or formal social support and did not seek information on informal social support, such as from the women's family and friends, which may have added insight. Also, research on women's experiences of volunteer support services may uncover support service development opportunities.

The statistical analysis was limited by availability of the linked data. The bivariate regression analysis was limited to the dependent and independent variable. Further analysis of women's characteristics such as maternal age, perfectionism, immigration status, history of assisted reproduction and effect of career development may provide association between risk of mental disorder and characteristics of women who gave birth in a private hospital. In the statistical description of a mental disorder was considered binary when it may be more appropriate to consider it on a continuum. Further research that used a continuum to measure mental disorder or measured self-efficacy as a precursor to mental disorder may provide information on preventive effectiveness of support services.

Generalisability of findings may be limited by the study size. Findings and recommendations aim to be meaningful to other environments which have similar attributes, such as other private hospitals, public hospitals and other nations. However, this study may not be generalisable to other hospitals, as

organisational cultures, geographical locations, ethnicities or models of funding (i.e. public hospitals) can have significant variations that would impact on study outcomes. Parallel data sets would increase credibility therefore repeating this study at other private and public hospital and community service providers, would provide comparative information that would increase understanding and transferability.

The findings gained from this study indicate change in societal trends, in particular the increasing uptake by women and skill in using digital technologies as a resource for parenting information and social support. These may require changes in professional support services and the way in which clinicians interact with women during the perinatal period. Future research on social support services for new mothers could examine effects of trends such as the increase in first-time mothers who are of mature age as the transition to motherhood is a particularly challenging event for mature first-time mothers.

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## Appendices

### Appendix 1 – Summary of Australian Social Support Services for New Mothers

	Prenatal Services	Labour and Birth Care	Immediate Postnatal Care	In-Home Services	0-5 years
PRIVATE HOSPITAL BIRTH 41%	Antenatal care provided by obstetrician Prenatal classes offered by the hospital or privately (e.g. Calmbirth, Hypnobirthing)	Supervised by obstetrician supported by hospital midwife	4 day (vaginal birth) or 6 days (Caesarean section) in-patient stay	Community visit option at 1 – 4 weeks	Community appointment available at interval plus fee-for service mothercraft, lactation consultant, sleep consultant
PUBLIC HOSPITAL 56%	Antenatal assessments provide by hospital midwife including psychosocial assessment. Prenatal classes provided by the hospital or private prenatal classes	“Normal” labour and birth is supervised by a hospital midwife. For women at high risk obstetrician supervision	1-5 day in-patient stay	Community visit option at 1 – 4 weeks	Community appointment available at interval plus fee-for service mothercraft, lactation consultant, sleep consultant
HOME BIRTH 3%	Antenatal assessments provide by midwife	Midwife	Midwife	Midwife visit 1 – 6 weeks	Community appointment available at interval plus fee-for service mothercraft, lactation consultant, sleep consultant

## Appendix 2 – Early Parenting Support Services Integrative Review

### Inclusion and Exclusion Criteria

	Include	Exclude
Objective	Studies on general support services for expectant parents and new parents	Studies on EPS services for specific medical conditions / disorders of woman or baby
Populations	Parents during pregnancy and with babies up to age 12 months when the study commenced	Preconception, assisted reproduction, babies older than 12 months when the study commenced
Intervention	Studies that aim to improve parenting confidence and competence or enhance / improve baby development, behaviour or attachment Heathy lifestyle support including counselling and classes	Controversial alternative services such as cults. Services within a closed, pre-existing social network (church / armed forces)
Timing	From conception until baby's first birthday when the study commenced	Before conception of after baby's first birthday when the study commenced
Settings	Primary care settings (hospital, community doctor or nurse, obstetrician, paediatrician, midwifery practice,) Mental health setting Community Setting (including home visits Virtual (web-based interventions)	Military health clinics, school health clinics, correctional facilities, worksites,
Study design	Qualitative, Mixed Methods, Cohort, RCT, Case Series	Systematic Reviews, Meta-Analysis, Meta synthesis
Countries	Countries in top 50 for 2014 Human Development Index, as defined by the United Nations Development Programme <a href="http://www.nationsonline.org/oneworld/human_development.htm">http://www.nationsonline.org/oneworld/human_development.htm</a>	Countries not in top 50 for 2014 Human Development Index
Languages	English	Non-English
Quality	> 70 % on Critical Appraisal Skills Program	< 70% on Critical Appraisal Skills Program
Relevance	High	Low

(US Preventive Services Task Force 2016)

### Appendix 3 – CASP Appraisal Tools

<b>Appraisal Tool for Qualitative / Descriptive Study Based on the Critical Appraisal Skills Program (CASP UK, 2018)</b>		
Criteria	Question	Y / N
1. Aims	Was there a clear statement of aims / goals / importance/relevance?	
2. Subjective	Is qualitative methodology appropriate (does it illuminate the subjective experience?)	
3. Method	Was research design appropriate to address aims of research and explain WHY method was used?	
4. Recruitment	Was recruitment discussed in terms of WHY most appropriate and HOW participants were selected?	
5. Data collection	Did data collection method address research issue?	
6. Relationship	Has relationship between researcher and participant been adequately considered?	
7. Ethics	Are ethics discussed: explain to participant / informed consent / confidentiality / effect of study on participant	
8. Rigor	Selection of data / in-depth description of themes / sufficient data / contradictory data discussed (outliers)	
9. Findings	Statement of findings in terms of research question / evidence / credibility (triangulation or validation)	
10. Value	Transferability to other populations or other ways to use / contribution to existing knowledge, practice or policy / identify new areas to research	
<b>Quality Score</b> Number of YES answers x 10 < 30 = low quality, 40 – 60 = medium quality, 70 – 100 = high quality		
<b>Relevance Score</b> High Relevance = the study is important, germane, material, pertinent or applicable to the integrative review Low Relevance = the study doesn't apply, is not related, extraneous, off the topic, unconnected or unimportant to the integrative review		

<b>Appraisal Tool for Experimental Study / Randomised Control Trial Based on the Critical Appraisal Skills Program (CASP UK, 2018)</b>		
<b>Criteria</b>	<b>Question</b>	<b>Y / N</b>
1. Focused issue	Was the study focused in terms of population / intervention / comparator / outcomes considered?	
2. Randomisation	Was the method of assignment to treatment randomised and allocation concealed from researcher?	
3. Blinding	Were clinicians and researchers blinded?	
4. Group similarity	Were groups similar in baseline characteristics? (age, sex, socioeconomic factors ... )	
5. Equality	Were groups treated equally apart from the intervention?	
6. Account of all subjects	Was trial completed with subjects accounted and subjects analysed in the groups they were randomised to?	
7. Size of effect	Was there a large treatment effect such that primary outcomes were specified / measured and / results for each reported?	
8. Precision of effect	Were statistical significance and confidence limits used to determine precise estimate of treatment effect?	
9. Value	Was transferability to other populations / other ways to use / contribution to existing knowledge, practice or policy or identification of new areas discussed?	
10. Importance	Were clinically important outcomes considered?	
11. Benefits	Were harms, costs and benefits considered?	
<b>Quality Score</b>		
Number of YES answers x 9.09 < 30 = low quality, 40 – 60 = medium quality, 70 – 100 = high quality		
<b>Relevance Score</b>		
High Relevance = the study is important, germane, material, pertinent or applicable to the integrative review Low Relevance = the study doesn't apply, is not related, extraneous, off the topic, unconnected or unimportant to the integrative review		

<b>Appraisal Tool for Cohort / Case Control / Cross-Sectional Study Based on the Critical Appraisal Skills Program (CASP UK, 2018)</b>		
<b>Criteria</b>	<b>Question</b>	<b>Y / N</b>
1. Focused issue	Is the study focused in terms of population / risk factors / outcomes / beneficial or harmful effect considered?	
2. Recruitment	Was cohort representative of population and recruited in an acceptable, non-biased, way?	
3. Exposure measurement	Was exposure accurately measured, validated measurements, without classification bias?	
4. Outcome measurement	Were the assessors blinded and the outcomes objective, validated, reliable for disease detection, measured similar in each group?	
5. Confounding factors	Were all confounding factors listed along with any modelling / stratification / regression / sensitivity analysis to adjust for confounders?	
6. Account of all subjects	Were all subjects accounted for at conclusion and follow up long enough for good OR bad effects to reveal?	
7. Results	Was the bottom line explained in terms of report rate / proportion between exposed and unexposed and the strength of association exposure to outcome?	
8. Precision	Were both estimate of treatment effect and confidence intervals precise?	
9. Believable	Was the design, time – dose response, gradient, plausibility and consistency strong?	
10. Value	Are the results transferability to other populations or able to be used in other ways?	
11. Evidence fit	Do the results fit with other evidence?	
12. Benefits	Do the results contribute to existing knowledge, practice, policy or identification of new areas to research?	
<b>Quality Score</b>		
Number of YES answers x 8.33 < 30 = low quality, 40 – 60 = medium quality, 70 – 100 = high quality		
<b>Relevance Score</b>		
High Relevance = the study is important, germane, material, pertinent or applicable to the integrative review Low Relevance = the study doesn't apply, is not related, extraneous, off the topic, unconnected or unimportant to the integrative review		

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## Appendix 4 – Table of Evidence

	Authors (Year)	Title of Article	Country	Aim of Study	Study Setting / Intervention	Study Design	Participants	Data Collection Method	Analysis	Outcomes Measured	Study Findings / Results	Journal	Key Words
1	Barnes, J. et al 2009	The utility of volunteer home-visiting support to prevent maternal depression in the first year	England	PROVIDE EVIDENCE OF VALUE - Provide evidence on the value of a volunteer home-visiting program to support mothers and their children	Home-start, a national voluntary agency that provides informal family support	Observational analytical, cohort study (clustered)	527 (274 + 253) mothers age 18 years and older, able to understand spoken English who scored 9 or more on SDI	home visits at 2 months and 12 months	Binary logistic regression to identify significant predictors of depression and multiple linear regression to identify predictors of the number of depression symptoms	SCID was used to identify minor or major depression and EPDS to identify depressive symptoms.	Between 2 and 12 months postpartum the volunteer support had no impact on the emergence of depression or depressive symptoms. The major predictor of depression at 12 months was depression at 2 months.	Child: care, health and development	home-visiting, infancy, maternal depression, prevention
2	Barnes, J. 2017	Randomized controlled trial and economic evaluation of nurse-led group support for young mothers during pregnancy and the first year postpartum versus usual care	England	DETERMINE EFFECTIVENESS - Determine the effectiveness of a group family nursing practice in reducing risk factors for child maltreatment	Group family nursing practices first trimester of pregnancy until infants are 12 months old, 44 group meetings in the curriculum that covered personal health; the maternal role; maternal life course: family and friends; environmental health; and related health and human services, with referrals made when necessary	Analytical experimental randomised control trial	(164) 97 and 67 women, 16 to 20 weeks pregnant, aged 20–24 with no previous live births and with low educational qualifications	four home visits; early pregnancy, 2 months, 6 months and 12 months postpartum to administered structured questionnaires and, by consent at 12 months, a 3- to 5-min mother and infant video-recording	Linear regression model was used to estimate mean difference at 12-month between the two arms of the trial. Secondary outcome linear models were used to examine the effect of the intervention.	Adult-Adolescent Parenting Inventory (AAPI-2); CARE Index; risk range for child maltreatment; infant cooperativeness; maternal depression; stress; program cost-effectiveness; sense of competence; social support; smoking, alcohol and drug use; relationship violence; breastfeeding to 6 months, maternal quality-adjusted life years (QALYs) and adverse events	No important effect on attitudes or risk of child maltreatment, the intervention arm had higher BF rates at 6 months and associated a positive health effect. There were perceived benefits greater parenting competence, in relation to social support and baby development. The model was not considered cost efficient at reducing child maltreatment.	BioMed Central	Early intervention, Pregnancy, Nurse, Young parenthood, Child maltreatment
3	Corr, L. 2015	Mothers' perceptions of primary health-care providers: thematic analysis of responses to open-ended questions	Australia	DESCRIBE EXPERIENCE - Describe views of women completing a residential early parenting programme on postnatal primary health care and their suggestions to enhance provider-patient interactions	Two residential early parenting centres	Descriptive survey, cross-sectional (with open ended responses)	138 women, 12 months postpartum, admitted to an early parenting support centre	Self-report questionnaires were provided to all women admitted during six-month period, those that consented were also interviewed using Composite International Diagnostic Interview (CIDI)	Descriptive statistics and thematic analysis	Physical health and mental health using Composite International Diagnostic Interview (CIDI)	85% of women reported a physical health problem (64% reported backache, 39% reported migraines and 18% reported haemorrhoids) and 63% met CIDI criteria for depression, generalised anxiety disorders or phobias. Their experience of primary health care (83% with a general practitioner and 95% with a child and family health nurse) was influenced by their perceptions of provider competence and quality of interactions - listening ability for general practitioners and understanding for child and family health nurse	Australian Journal Primary Health	0
4	Duncan, L. 2010	Mindfulness-Based Childbirth and Parenting Education: Promoting Family Mindfulness During the	USA	DETERMINE EFFECTIVENESS - Mindfulness meditation practices to ameliorate the impact of stress of pregnancy, childbirth and	Pregnancy mindfulness-Based Stress Reduction program	Observational analytical, mixed-method pilot study	27 pregnant women, in the second or early third trimester, with their support person	self-report questionnaires described experiences of pregnancy, childbirth, early parenting and use of	paired t-tests used to determine use of meditation to cope with a stress in pregnancy and interpretive phenomenology	Perceived Stress Scale, Pregnancy Anxiety Scale, Differential Emotions Scale (modified), Positive and Negative Affect Schedule was used to assess the intensity of affect, three subscales from the Five Factor	Following the intervention there was a statistically significant increases in mindfulness and in positive affect, as well as a decrease in anxiety and depression. Participants perceived benefits of using	Journal Family Studies	Mindfulness Meditation Stress Coping Emotion Pregnancy Childbirth Parenting

		Perinatal Period		early parenting, promoting family health and well-being				mindfulness skills	was undertaken for qualitative data	Mindfulness Questionnaire, an expanded Ways of Coping scale and Center for Epidemiologic Studies Depression Scale	mindfulness practices during the perinatal period		
5	Fisher, J., et al. 2016	Gender-informed, psychoeducational programme for couples to prevent postnatal common mental disorders among primiparous women: cluster randomised control trial	Australia	DETERMINE PREVENTION - Determine whether psychoeducational program can prevent perinatal common mental disorders (PCMD)	manualised program of primary care from a trained nurse, print materials and face-to-face seminar at Maternal and Child Health Centres	Analytical experimental, randomised control trial (cluster)	364 (187 plus 177) English-speaking primiparous women receiving primary care at 48 early childhood health centres	6 and 26 weeks postpartum - Composite International Diagnostic Interview (CIDI) and Patient Health Questionnaire completed via telephone	intention-to-treat analysis using logistic regression adjusted for prognostic factors and cluster effects	primary outcome being diagnostic criteria for perinatal common mental disorders using DSM IV and secondary outcomes were measured using PHQ-9 and GAD -7	The intervention reduced the prevalence of perinatal common mental disorders among primiparous women, without a psychiatric history, in the first six months postpartum. Following the intervention there was a statistically significant reduction in poor self-rated health and in mild - moderate anxiety symptoms.	BMJ Open	0
6	Fowler, C. 2012	Parent satisfaction with early parenting residential services: a telephone interview study	Australia	DESCRIBE EXPERIENCE - Explore parents' experience of an early parenting centre admission and their parenting experience since discharge.	Early parenting residential intervention	Descriptive qualitative study	109 (108 mothers and 1 father) convenience sample	Telephone interview at 4 and 52 weeks after discharge, using Appreciative Enquiry to identify and explore strengths of the service and thematic content analysis using a priori template	thematic content analysis based on interview responses	parenting; confidence, baby knowledge, expectation, skills	Themes (sub themes); 1. greater confidence (feeling in control, trusting ability, able to interpret baby cues / behaviours, affirmation of skills), 2. greater knowledge about baby (understanding baby need, adapting parenting to baby cues), 3. changing parents' expectations (normalising experience, reconstructing baby behaviour) and 4. sustainability of parenting skills (taking charge, adjusting strategies to home situation, resisting pressure from relatives, experiencing disappointment)	Contemporary Nurse	residential parenting service, qualitative research, child and family health, parenting
7	Goulet, L. 2007	Type and Timing of Services Following Postnatal Discharge: Do they make a difference	Canada	DETERMINE EFFECTIVENESS - Determine type and timing of postnatal services was associated with health, breastfeeding duration, and usefulness of the service	Postnatal service, including telephone call, appointments and home visits by physician or nurse	Observational analytical cohort study	2583 mothers who had experienced vaginal birth one month prior	telephone survey at 1 month after discharge (plus or minus 3 days)	Chi-square tests were used to determine the relationships between variable then regression analysis to determine associations between services and outcomes	Mental health using Centre for Epidemiological Studies Depression Scale (CES-D Scale) 12-item, breastfeeding, newborn health and maternal assessment of usefulness of services	Timing of post-natal follow-up was more important than type of follow-up. The sooner the telephone call or visit the more likely the women were to have found it useful	Women and Health	postnatal care, postpartum care, home visit, length of stay, women, newborn, mental health, hospital readmission, satisfaction
8	Hauck, Y. et al 2011	The effectiveness of an early parenting intervention for mothers with infants with sleep and settling concerns: a prospective non-equivalent	Australia	DETERMINE EFFECTIVENESS - Compare changes in children's sleep and settling behaviours as well as in maternal; confidence, competence, depression and anxiety	Early parenting residential intervention for mothers with infants with sleep and settling concerns	Observational analytical case control study with prospective non-equivalent before-after design	178 Women at 4 - 6 months postpartum: intervention group = 93 women discharged from early parenting residential service (78.5%	Questionnaires mailed out prior to admission and four weeks later, include Parenting Sense of Competence scale, Maternal Competence Scale,	descriptive statistics, paired t-tests, psychometric analysis, univariate analysis and logistic regression analysis were undertaken	parenting sense of competence scale, maternal confidence scale, parental interactive bedtime behaviour scale and EPDS	Although there was no significant difference between the groups for ability to recognise baby's needs the intervention group demonstrated significantly higher perceptions of competence and confidence and showed reduction in active / movement settling strategies four weeks later	Journal Clinical Nursing	anxiety, children, competence, depression, infant, nurses, nursing, parenting, sleep

		before-after design					primiparous) plus community sample of = 85 women (54.1% primiparous)	Parental Interactive Bedtime Behaviour Scale and EPDS						
9	Kohlhoff, J. 2016	Antenatal psychosocial assessment and depression screening in a private hospital	Australia	PROVIDE EVIDENCE OF VALUE - Report outcomes of an antenatal psychosocial assessment program and report characteristics of depression symptoms in private hospital setting	antenatal psychosocial assessment program at a private hospital report demographic, psychosocial and obstetric characteristics and correlates of elevated depression symptoms and report preliminary outcomes (numbers of referrals) associated with the emotional wellness program	Observational analytical cohort study	993 women booked for pregnancy care undertook psychosocial assessment	file audit	following bivariate analysis, hierarchical multiple linear regression was used to identify predictors of antenatal depression while controlling for other variables by binary logistic regression to examine associations between the presence of the various risk factors and probable major depression (total EPDS score >12).	Antenatal Risk Questionnaire and EPDS	Depressive symptoms were common (6%) in these well-supported women, with access to practical and emotional support, socio-economically advantaged and high level of education, indicative of probable major depression (EPDS total score ≥13). 60.3% reported significant major change loss or stressor in the previous 12 months, and frequency of women reporting a history of depression or anxiety lasting more than 2 week (12.9%) was considerably higher than reported in an Australian public hospital cohort.	Australian Journal Obstetrics Gynaecology	antenatal, depression, private hospitals, psychosocial, screening.	
10	Kurth, E. et al. 2016	Safe start at home: what parents of newborns need after early discharge from hospital - a focus group study	Switzerland	DESCRIBE EXPERIENCE - Investigate experience of new parents and examine their views on care following early hospital discharge program	Home care after early discharge	Descriptive qualitative study	24 German or Turkish speaking participants who had become new parents in the prior 9 months	6 focus groups used visualisation using a "playful design" method using photographs of Lego models explored and developed theme. Transcripts and field notes provided information on the experience of new parents and their suggestions for the development of health care services	thematic analysis	physical health, support need, service access and inter-professional coordination	Three main themes (with subthemes); 1. early experience at home alter family system (caring for newborn, caring for oneself and orienting to new role), 2. needs-oriented postpartum care (access to information and care, essential elements of care package and aspects of quality care) and 3. organising and coordinating care (network building, case management and helpline).	BioMed Central	postnatal care, patient satisfaction, interprofessional collaboration, length of hospital stay, health visiting, midwifery	
11	Perez-Blasco, J. 2013	Effects of a mindfulness-based intervention on psychological distress, well-being, and maternal self-efficacy in breastfeeding mothers: result of pilot study	Spain	DETERMINE EFFECTIVENESS - Effects of a mindfulness-based intervention in breastfeeding mothers	Mindfulness-based intervention on psychological distress, well-being, and maternal self-efficacy in breastfeeding	Analytical experimental, randomised parallel group design	21 breastfeeding women randomly assigned to; treatment group (13) and control group (8)	Pre-test prior to intervention and repeated three weeks following the 8-week training	comparing pre and post-test measures Five Facet Mindfulness Questionnaire, Self-Compassion scale, Depression, Anxiety and Stress Scale (DASS-21), Satisfaction with Life Scale, Subjective	mindfulness-based breastfeeding support service effectiveness	Following intervention women showed increased self-efficacy and mindfulness as well as decreased anxiety, stress and psychological distress. Large effect sizes were observed in all dimensions.	Archives Women's Mental Health	mindfulness-based intervention, breastfeeding mothers, maternal self-efficacy, well-being, psychological distress	

									Happiness Scale.				
12	Razurel, C. 2015	The role of satisfaction with social support on the psychological health of primiparous mothers in the perinatal period	Switzerland	VALIDATE A TOOL - construct and validate a scale for measuring satisfaction with social support and investigate the role between satisfaction and psychological health during the perinatal period	Maternity hospital	Analytical observational cohort study	235 women aged 21 - 43 years who attended a maternity hospital	Self-administered questionnaires at prenatal visit and 6 weeks postpartum	Principal component and factor analysis, correlation analysis and multiple regression analysis of different sources of support	STAI (State-Trait Anxiety Inventory) EPDS (Depressive symptoms), parental self-efficacy,	Support from the woman's mother was important, satisfaction with all types of support (emotional, material, esteem and informative) from the partner was essential and reduced psychological disorders. lack of social network or family environment was a vulnerability, esteem support from professionals was associated with less anxiety and depressive symptoms as well as increased self-efficacy and satisfaction with informational support from professionals was identified with reduced anxiety and dissatisfaction, from contradictory information	Women and Health	anxiety, birth, parental self-efficacy, perinatal depression, social support
13	Roman, L. 2009	Alleviating Perinatal depressive symptoms and stress: a nurse-community health worker randomised trial	USA	DETERMINE EFFECTIVENESS - To determine nurse-community health worker home visiting team reduction on depressive symptoms and stress and improvement of psychosocial resources for Medicaid eligible pregnant women	Nurse-community health worker home visiting (One assessment visit, 9 prenatal visits and 9 postnatal visits)	Analytical experimental, randomised crossover study	613 women, live birth and not released custody, eligible for Medicaid	Assessment prenatally and 5 assessment times 15 months postpartum	Mixed effects regression model	CES-D, Stress, Mastery	Significantly fewer depressive symptoms were most pronounced for women with low psychosocial resources, high stress, or both. Women in the nurse group reported less stress and higher mastery. No difference between groups regarding social support or self-esteem.	Archives Women's Mental Health	community health worker, low-income women, nurse-community health worker team, perinatal depressive symptoms, perinatal stress
14	Rowe, H. 2010	The contribution of Australian residential early parenting centres to comprehensive mental health care for mothers of infants: evidence from a prospective study	Australia	PROVIDE EVIDENCE OF VALUE - Contribute to the evidence on residential early parenting services.	Residential Early Parenting Service	Analytical observational cohort-study with a prospective design	79 women with baby < 12/12, recruited during admission to residential EPC, with sufficient English language to complete the questionnaire	During admission and at one and six months after discharge using self-report Profile of Mood States questionnaire and standardised measure of infant behaviour	Chi-square and t-tests were undertaken for univariate comparison and multivariate analysis was undertaken to assess change in outcomes over time	EPDS, POMS and difficult infant behaviour as well as satisfaction with the program	Women who attended a residential early parenting service showed a statistically significant improvement in psychological function at one month after discharge, sustained at six months after discharge. These women also reported improvement in infant behaviour and sleep at one month after discharge also sustained at six months after discharge.	International Journal Mental Health Systems	0
15	Shorey, S. 2015	Perceptions of primiparas on a postnatal psychoeducation programme: The process evaluation	Singapore	EXPLORE EXPERIENCE - To explore the perceptions of primiparas on a psychoeducational program	Public tertiary hospital / postnatal psychoeducation programme at participants home programme - 90-minute home visit, three weekly telephone follow-up	Descriptive qualitative study	18 primiparas with different maternal self-efficacy scores at six weeks postpartum using modified Perceived Maternal	face-to-face interview to gather data on perceptions of the content, delivery methods and impact of the psychoeducation programme	thematic analysis	acquisition of knowledge and skills and family support	Participants faced early postpartum challenges; negative emotions, breastfeeding difficulties and support issues. The program increased self-care, fostered help-seeking behaviour, improved emotional well-being, increased perception of	Midwifery	Depression Maternal self-efficacy Postnatal Process evaluation Psychoeducation Social support

					and an educational booklet.		Parental Self-Efficacy scale, modified 17 items				confidence in newborn care and supported breastfeeding.		
16	Small, R. 2014	Improving population level maternal health: a hard nut to crack? Long term findings and reflections on a 16-community random trial in Australia to improve maternal emotional and physical health after birth	Australia	DETERMINE EFFECTIVENESS - To report 2-year outcomes following a program of resources, information and support for new mothers	In 2006 eight rural and eight metropolitan municipalities in the state of Victoria were randomly allocated to a community program of resources, information and support for mothers (PRISM).	Analytical experimental, randomised, parallel group study	10444 (7169 + 3275) women participated	postal questionnaire at 24 months postpartum	primary intention to treat analysis, logistic regression for binary response and linear regression for continuous variables, with adjustment for randomisation	Depression (EPDS greater than or equal to thirteen), General Health Measure via short form 36 (SF-36) including physical component score (PCS) and mental component score (MCS), Experience of motherhood Scale (EOM) and Parenting Stress Index (PSI)	There was no statistically significant difference between the intervention and the trial arms in depression prevalence, mental health, physical health (PCS), experience of motherhood or parenting stress	PLOS ONE	0

Appendix 5 – Invitation to Midwives and Nurses

## MATERNITY STAFF — DISCUSSION GROUPS

**Do you provide care for new mothers and their babies?**

We would like to hear your opinion on parenting support.

Care providers are invited to participate in a research study on Early Parenting Support Services for Women Who Gave Birth in a Private Hospital: A Mixed-Methods Explanatory Sequential Analysis



This study has been approved by NSP Hospital Ethics Committee and University of Technology Sydney Human Research Ethics Committee (ETH16-0839.)



**Midwives and nurses are invited to attend a focus groups 2:30—3:45 pm on Tuesday 24 October 2017 to discuss support services such as classes, clinics and home visits.**

Thank you for taking the time to consider this study. For further information, please contact Deborah on [redacted] or email [redacted]@bigpond.com

## **Appendix 6 – Outline for Inservice Presentation on Transition to Parenthood and the Role of the Midwife**

1. Transition to Parenthood
2. Change of Parenthood
3. Stress of Parenthood
4. Qu: How can midwives help?
5. Early Parenting Support defined
6. The benefits of providing EPS
7. Improved outcomes (short and long term)
8. What is EPS?
9. Social Support – classified
10. In Australia PROFESSIONAL EPS services
11. Universal Health Care – fragmented care
12. NSW Health policy – practice, assessment and referral
13. Public vs Private
14. Parenting in Practice
15. Anticipatory Guidance
16. Parenting Resources - Tresillian
17. Emotional Health and Wellbeing

## Appendix 7 – Invitation to Obstetricians and Paediatricians

# OBSTETRICIANS & PAEDIATRICIANS

We would like to hear your thoughts on support services for first time mothers.

Clinicians who provide care for first-time mothers and their babies are invited to participate in a PhD research study:  
**Early Parenting Support Services for Women Who Gave Birth in a Private Hospital; A Mixed-Methods Explanatory Sequential Analysis**



This study has been approved by the Hospital Ethics Committee and University of Technology Sydney Human Research Ethics Committee (ETH16-0839.)



**Clinician are invited to participate through 20 minute interview, at a place and time of convenience. The aim of the interview is to explore thoughts on early parenting services such as classes, clinics and home visits.**

Thank you for taking the time to consider this study. For further information please contact

Deborah Sims on [redacted] or email [redacted]@bigpond.com

## Appendix 8 – Invitation to Women

New moms  
are invited to  
participate in a  
PhD study  
on Early Parenting  
Support Services  
for Women Who Gave  
Birth in a  
Private Hospital



This study has been  
approved by  
the Hospital Ethics  
Committee and  
University of  
Technology Sydney  
Human Research  
Ethics Committee  
(ETH16-0839.)

Thank you for taking the time to  
consider this study. For further in-  
formation please contact the re-  
search midwife, Deborah Sims on  
[redacted] or email [redacted]  
[redacted]@bigpond.com

**STUDY ON**  
**SUPPORT**  
**FOR**  
**NEW MOTHERS**



We would like to hear your experience of support services for first-time mothers.



Mothers who gave birth between May and September 2017 are invited to be interviewed, at a place and time of their convenience, by a registered midwife. The aim of the interview is to explore thoughts on services you have experienced such as prenatal or parenting classes, clinics and home visits.



For further information please contact the research midwife, Deborah Sims, on [redacted] or email [redacted]@bigpond.com

## Appendix 9 - Participant Information Sheet (North Shore Private Hospital)



PARTICIPANT INFORMATION SHEET 001 16.3.17

(North Shore Private Hospital – Clinician)

Early Parenting Support Services for Women Who Gave Birth in a Private Hospital

### Invitation

You are invited to participate in this research study of early parenting support services for women who have given birth in a private hospital.

The study is being conducted by Deborah Sims who is a doctoral student at the University of Technology Sydney and as a requirement for the Doctor of Philosophy degree. The other members of the research team are:

- Professor Cathrine Fowler, Professor Tresillian Chair of Child and Family Health, Faculty of Health, University of Technology Sydney
- Doctor Christine Catling, Senior Lecturer in Midwifery, Faculty of Health, University of Technology Sydney
- Doctor Fenglian Xu, Chancellors Postdoctoral Research Fellow, Faculty of Health, University of Technology Sydney

(No member of the research team will receive remuneration from any sponsor for this research.)

You have been invited to participate in this study because you have experience of caring for women who have given birth in a private hospital. This study aims to further health knowledge and may improve future care of new parents, however it will not directly benefit you. Participation in this study will not cost you anything. You are not likely to receive any personal benefit from participating in this study; however, your contribution will result in improved understanding of early parenting support services.

Participation in this study is voluntary. New information about the early parenting support services may become available during the course of the study. You will be kept informed of any significant

new findings that may affect your willingness to continue in the study. If you wish to withdraw from the study you can do so at any time, without a reason and without consequences. However, it may not be possible to withdraw your data from the study results if these have already had your identifying details removed.

If you agree to participate in this study, you will be asked to sign the Participant Consent Form and be interviewed on your experience of early parenting support services. This study will be conducted over 10 months, March – December 2017. The services being investigated in this study are standard services offered in this institution or universal services offered to all Australian women following the birth of their baby. If you agree to participate in this study, you will then be interviewed for approximately twenty minutes at a place and a time of your convenience / contribute to a focus group interview at the hospital.

Being interviewed about your experience of early parenting support services may raise some negative emotions. As there are no medical procedures involved the risks are very low. If you suffer any emotional disturbance, injuries or complications as a result of this study, you should contact the principle researcher, Cathrine Fowler, who will assist you in arranging appropriate care. The Employee Assistance Program Help Line be accessed free of charge on (to be provided by administration upon study approval). You may have a right to take legal action in order to obtain compensation for any injuries or complications resulting from the study. If you receive compensation that includes an amount for medical expenses, you will be required to pay for your medical treatment from those compensation monies. You do not give up any legal rights to compensation by participating in this study. If you are not eligible for compensation for your injury or complication under the law, but are eligible for Medicare, then you can receive any medical treatment required for your injury or complication free of charge as a public patient in any Australian public hospital.

If you give us your permission, by signing the consent document, we plan to discuss the results in a Doctor of Philosophy, Nursing, Dissertation. Results may be disseminated through professional conferences presentation and publications in professional journals. Information will be presented in such a way that you cannot be identified. Results of the study will be provided to you, if you wish.

All aspects of the study, including results, will be confidential and only the researchers listed above will have access to information on participants. Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law.

This study has been approved by North Shore Private Hospital Ethic Committee and the University of Technology Sydney. Any person with concerns or complaints about the conduct of this study should contact (insert name and contact for supervisor at NSPH) or Cathrine Fowler, who is the person at UTS nominated to receive complaints from research participants. You should contact her on ■■■■■■■■■■ and quote [HREC project number].

Thank you for taking the time to consider this study. If you wish to take part in it, please sign the attached consent form. This information sheet is for you to keep.

PARTICIPANT INFORMATION SHEET 001 30.3.17

(North Shore Private Hospital – Women)

Early Parenting Support Services for Women Who Gave Birth in a Private Hospital

You are invited to participate in this research study of early parenting support services for women who have given birth in a private hospital.

The study is being conducted by Deborah Sims who is a doctoral student at the University of Technology Sydney and as a requirement for the Doctor of Philosophy degree. The other members of the research team are:

- Professor Cathrine Fowler, Professor Tresillian Chair of Child and Family Health, Faculty of Health, University of Technology Sydney
- Doctor Christine Catling, Senior Lecturer in Midwifery, Faculty of Health, University of Technology Sydney
- Doctor Fenglian Xu, Chancellors Postdoctoral Research Fellow, Faculty of Health, University of Technology Sydney

(No member of the research team will receive remuneration from any sponsor for this research.)

You have been invited to participate in this study because you have experience of giving birth in a private hospital. This study aims to further health knowledge and may improve future care of new parents, however it will not directly benefit you. Participation in this study will not cost you anything. You are not likely to receive any personal benefit from participating in this study; however, your contribution will result in improved understanding of early parenting support services.

Participation in this study is voluntary. If you decide not to participate it will not affect the care you receive now or in the future. Whatever your decision or your relationship with the staff caring for you. New information about the early parenting support services may become available during the course of the study. You will be kept informed of any significant new findings that may affect your willingness to continue in the study. If you wish to withdraw from the study you can do so at any time, without a reason and without consequences. However, it may not be possible to withdraw your data from the study results if these have already had your identifying details removed.

If you agree to participate in this study, you will be asked to sign the Participant Consent Form and be interviewed on your experience of early parenting support services. This study will be conducted over 10 months, March – December 2017. The services being investigated in this study are standard services offered in this institution or universal services offered to all Australian women following the birth of their baby. If you agree to participate in this study, you will then be interviewed for approximately one hour at a place and a time of your convenience.

Being interviewed about your experience of early parenting support services may raise some negative emotions. As there are no medical procedures involved the risks are very low. In the unlikely event that you suffer any emotional disturbance, injuries or complications or have any concerns as a result of this study, you should contact the principle researcher, Cathrine Fowler on (02) 9514 4791, for assistance to arrange appropriate care. The Tresillian Help Line can be accessed free of charge from 7 am to 11 pm on 1300 272 7360..

If you give us your permission, by signing the consent document, we plan to discuss the results in a Doctor of Philosophy, Nursing, Dissertation. Results may be disseminated through professional conferences presentation and publications in professional journals. Information will be presented in such a way that you cannot be identified. Results of the study will be provided to you, if you wish.

All aspects of the study, including results, will be confidential and only the researchers listed above will have access to information on participants. Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law.

This study has been approved by the University of Technology Sydney Human Research Ethics Committee (UTS HREC). If you have any concerns or complaints about any aspect of the conduct of this research, please contact the Ethics Secretariat on ph.: +61 2 9514 2478 or email: [Research.Ethics@uts.edu.au](mailto:Research.Ethics@uts.edu.au)), and quote the UTS HREC reference number ETH16-0839. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

Thank you for taking the time to consider this study. If you wish to take part in it, please sign the attached consent form. This information sheet is for you to keep.

## Appendix 10 – Focus Group Questions

Early Parenting Support Services for Women who Give Birth in a Private Hospital

### CLINICIAN INTERVIEW QUESTIONS

**Preamble:** The aim of the study is to gather information on parenting support services for first-time mothers, from conception to baby's first birthday. (labour and birth classes, postnatal classes, clinic appointments and psychosocial support. This information may assist in the development of services.

*The 45 – 60 minute discussion will be audio-recorded and all data will be de-identified and amalgamated.*

1. On your consent form please note your qualifications and how long you have been qualified
2. How long have you been affiliated with the hospital and in what roles?
3. What early parenting issues do you discuss with **first-time** mothers?
4. Are there different parenting issues that you discuss if baby is unwell?
5. For first-time mothers, what support services do you recommend or refer to?  
(prenatal classes, parenting classes, early childhood health centre,
6. Do you provide written information?
7. Any specific services for women with English as second language?
8. Do you use psychosocial assessment tools to assist you identifying risk in first time mothers?
9. For first-time mothers identified as being at risk of mental illness; what referral or support options do you recommend?
10. What changes would you like to see to the support services that are available in the hospital?
11. What changes would you like to see to the support services that are available in the community?
12. What trends or changes have you noticed in first-time parents OR in early parenting support services?

Thank you for your time. A report of findings will be provided to the hospital.

PHD INTERVIEWS / clinician focus group questions and probes 231017

## Appendix 11 – Interview Questions Clinician

1

### CLINICIAN INTERVIEW / CLINICIAN FOCUS GROUP QUESTIONS

*In order to gain perspective from a wide range of clinicians the same questions will be used for executive interviews as for focus groups.*

#### Early Parenting Support Services for Women who Gave Birth in a Private Hospital: A Mixed-Methods Study - Phase 2

1. What is your current position and how many years have you been in this position?
2. What are the main early parenting issues that you discuss with first time mothers?
3. How often do you discuss these early parenting issues with first time mothers?
4. How much time do you spend on these issues? (probe: is it sufficient; can you provide an example etc.)
5. What support services do you commonly recommend for first time mothers? How often do you provide a recommendation or a referral? How confident do you feel about your knowledge of community supports available to new parents? Do you provide new mothers with written information?
6. What psychosocial information do you use to assist you in providing a tailored care plan? (probe how confident are you in assessing a woman's psychosocial needs; on a scale one to ten of competence in assessing psychosocial needs would you place yourself 1 being no confident 10 being expert level of competence. What psychosocial assessment and intervention education have you participated?)
7. Do you use any psychosocial assessment tools to assist you in providing a tailored care plan? (how confident are you in drawing on assessment information to design care plans; how confident are you in engaging the women in designing the care plans?; on a scale one to ten of competence in design psychosocial interventions would you place yourself 1 being no confident 10 being expert level of competence)
8. For women identified as having psychosocial risk factors / being at risk what referral and support options have you recommend? Can you provide me with

## Appendix 12 – Interview Questions for Women

Could you start by telling me about yourself and your baby

1. What is the baby's name? ..... How old is baby .....? Has baby had any health issues? .....
2. How old were you when baby was born? .....What is your professional background? .....What is your highest level of education? ..... Have you had any health issues since you became pregnant?..... Do you have a partner? ..... Is a language other than English spoken in your home? .....
3. In what ways is being a parent what you expected or different from what you expected?
4. How did you get information on pregnancy, labour and birth, babies or parenting? (on-line or printed?, English or other?)
5. What emotional health assessments did you have during pregnancy or since birth?
6. What emotional wellbeing of mental health services have you accessed since you became pregnant?
7. How did you learn about services to help your baby or you as a new parent? Was the format / timing / language of the information suitable?
8. What parenting or baby care classes, clinics or appointments did you use?

For each service ask

How were these helpful? .....

In what ways did this service help you as a parent? .....

In what specific ways did this service change your confidence as a parent?

Would you / have you, recommended this service to other new mothers?

9. Are there any early parenting support services would you have like to have been offered?
10. Were there any EPS services that were recommended that you didn't access or stopped using?

Thank you for your time. Is there anything that you would like to ask me?

PHD INTERVIEW ADMIN / Women Interview Questions 250318

## Appendix 13 – Executive Summary

**Executive Report**  
**Social Support Services for New Mothers**

18 September 2018

**To: minimize risk of mental disorder  
increase customer satisfaction  
improve outcomes**

Mental disorder in a new mother increases the risk of

- reduced quality of life
- partner developing a mental disorder
- preterm birth
- low birth weight
- impacting the baby's cognitive, emotional, behavioural, psychomotor or language development
- baby developing a mental disorder in adolescence
- increasing LOS and clinical workload for VMOs and staff
- increased inpatient cost

- Twenty percent of new mothers will develop a mental disorder
- Women who give birth in a private hospital are at increased risk of developing a mental disorder
- Women who give birth in a private hospital are less likely to be assessed for a mental disorder
- Women who give birth in a private hospital are less likely to access social support services
- Social support services reduce the risk of mental disorder

**FINDINGS**

1. Timing and format of information on support services may not be the most useful
2. The most acceptable form of parenting reassurance came from peer-support groups and on-line peer-support. However, services that were offered were through the 'expert model of care', not through peer support
4. New mothers felt that they were not listened to by service providers, especially in regard to formula feeding
5. Emotional support was important to them but not always offered by the services

**RECOMMENDATIONS**

1. Develop **COMMUNICATIONS STRATEGY**
2. Provide a **HOSPITAL NEW-BABY CLUB**
3. Offer a **MIDWIFE NAVIGATOR**
4. Incorporate **EMOTIONAL SUPPORT** in support services
5. Support services based on **PARENTING IN PARTNERSHIP**
6. **FORMULA FEEDING** Support

## Appendix 14 – Interview Questions Administrator

### MATERNITY SERVICE ADMINISTRATOR QUESTIONS

#### Early Parenting Support Services for Women who Gave Birth in a Private Hospital: A Mixed-Methods Study - Phase 4

1. What is your current position and how long have you been in this position?
2. What are the main early parenting services provided to first time mothers by the hospital?
3. What early parenting services have been provided by the hospital in the past and why are they no longer available?
4. Would you like to make any comments on the study findings that have been provided to you?
5. What early parenting services does the hospital plan to offer in the future?

*Thank you for your time. Are there any questions that you have about this study?*

## Appendix 15 – Codebook

# PHD PHASE 2 DATA CODING AND ANALYSIS

Node Name	Node Description
<b>MAJOR THEME - MENTAL HEALTH</b>	<b>ALL DATA THAT REFERS TO MENTAL ILLNESS, MENTAL HEALTH, EMOTIONAL WELLBEING, INCLUDING PREVENTION OF ILLNESS, ASSESSMENT OF RISK (PSYCHOSOCIAL) TREATMENT FOR DISORDER</b>
Admission	Inpatient admission to hospital for mental illness
Awareness	Recognition of mental illness
Mental disorder risk reduction	Lower the likelihood of mental illness or the affects
Mental Health Risk Assessment	Data on assessment of risk to mental health
Dads	Fathers at risk / suffering mental illness
DV	Domestic violence
Hospital Service	Mental health services provided by the private hospital
<b>PSYCHOSOCIAL ASSESSMENT</b>	The subtheme of perinatal psychosocial assessment
Medicare changes	Changes to federal government legislation that require obstetricians to undertake assessment of risk of mental illness
Psychosocial risk	History of mental disorder, medical disorder or abuse, stressful situation, perfectionistic traits,

Node Name	Node Description
Screening versus Assessment	Psychosocial assessment; continuity of care, EPDS, Medicare changes,
Trust	Developing trust through rapport or continuity of care
Ob Subspecialty	Obstetric subspecialty such as infertility, medical high risk
Referral and Treatment	Referral and treatment for mental disorder
Gidget House Counselling service	Gidget House Counselling service
GP	General Practitioner
In-patient	Patient admitted to a hospital
Psychological support	Emotional or mental support
Psychologist	Perinatal psychologist or non-specialist psychologist from prior history
Psychiatrist	Physician specialised in psychiatry
Social Worker	
Stigma	Mental health and wellbeing or disorder
<b>MAJOR THEME - NEW SERVICES</b>	<b>SUGGESTIONS FOR DEVELOPMENT OF NEW SERVICES</b>
New Service Discharge Planner Midwife	Midwife who is allocated prenatally and provides continuity of care
New Service Discharge Planner Midwife Focus Group CONSENSUS	Focus group reached consensus on Midwife who is allocated prenatally and provides continuity of care

Node Name	Node Description
New Service Facilitate socialisation	Mothers group or peer-support group
New Service Help Line	Telephone help-line
New Service Model of Care	Woman centred model of care
New Service Model of Care (Focus Group consensus)	Focus Group consensus on woman centred model of care
New Service - Private ECHC	Privately practicing or privately provided community nurse
New Service - Psychosocial Assessment	Assessment of risk of mental illness
New Service – Psychosocial Assessment Focus group consensus	Focus group consensus on Assessment of risk of mental illness
New Service Return to Hospital	Parenting service provided following discharge
New Service SCN Follow Up	Parenting service provided following discharge from special care nursery
New Service Visiting hours or Rest period	Staff communicated / encouraged rest period for new mothers – limited visiting during this time
New Services App	Mobile telephone application
New Services Classes	Parenting classes post discharge
New Services ESL or CALD	Services for women and their families where English is a second language or there is cultural diversity
New Services Follow-up call	Post discharge follow-up call by the midwife

Node Name	Node Description
New Services Information	Parenting information
New Services In-home	In-home services provided by the hospital midwife
New Services Online EPS Information	Online early parenting support services provided by the hospital
New Services Support Groups	Peer-support groups organised by the hospital
<b>MAJOR THEME - THE CLINICIAN</b>	<b>ALL DATA THAT REFERS TO A PROVIDER OF EPS SERVICES</b>
Breastfeeding - Clinician Expectations	Clinicians expectations that women will breastfeed
Follow up with paediatrician	Paediatrician follow-up appointment for early parenting support
Obstetrician information	Obstetrician provided information or support on early parenting
Obstetrician thoughts on information from paediatrician	Theme of paediatrician providing information to parents on the early childhood health centre or child and family health nurse
<b>MAJOR THEME - THE EARLY PARENTING ISSUES</b>	<b>COMMON PROBLEMS OF EARLY PARENTING</b>
Normalising versus anxiety	Parent normalising versus developing anxiety
Parent Rest Sleep Fatigue	Parent issues with: Rest Sleep Fatigue
<b>MAJOR THEME - THE INFORMATION</b>	<b>ALL OF THE DATA THAT REFERS SPECIFICALLY TO INFORMATION; FORMAT (WRITTEN OR ON-LINE), TIMING, PROVIDED, RECOMMENDED ...</b>
Information on EPS Services	Information to enable parents to access early parenting support services

Node Name	Node Description
Information ESL	Parenting information in languages other than English
CALD	Parenting information for women from culturally and linguistically diverse backgrounds (cultural safety)
Information Given on Parenting	Parenting information that is routinely or commonly provided
Accepting Information	Women accepting the parenting information
Clinician Determined	clinician determined information versus woman determined
Consistency of Information	Reliability and uniformity of information
Hospital Information Services	New or existing early parenting support services that provide parenting information
Information on Unwell Baby	Parenting information when baby has medical history
Focus group Consensus on Information on Unwell Baby	Focus group consensus parenting information when baby has medical history
Information on EPSS	Information on early parenting support services
Information on LB& risks	Information on risks of labour and birth
Information on Rest or sleep of fatigue	Information on Rest or sleep of fatigue
Information and Instinct Focus Group Consensus	Instinct Focus Group Consensus on parenting instinct and issues with information processing
Information as Reassurance	Providing reassurance to the woman

Node Name	Node Description
Information on baby weight loss - focus group consensus	Focus group consensus on providing reassurance to the woman on baby weight loss -
Information on Mental Health	Providing parents with information on emotional wellbeing or mental illness
Information on Parenting Resources	Providing parents with information on parenting resources in the community
Instinct	Parenting instinct
Normal Behaviour and BF	Normal baby behaviour and breastfeeding
Information on Normal Newborn Focus Group Consensus	Focus group consensus on the importance of providing parents with information on normal newborn
Online Sources of Information	On-Line Sources of Information on baby behaviour and feeding
Overload	Information overload
Reliability of information	Sources of information; internet, clinician, social media ...
Timing of information	Provision of information in relation to the birth of the baby
Woman Determined Information	Information that is determined by the woman
Information Online versus written	Advantages and disadvantages to women of accessing parenting information online or in hardcopy
Written Info	Written information, printed matter, hardcopy
Online Info	Online Information through websites or blogs

Node Name	Node Description
Focus Group Sharing Information	Focus group was used by participants for sharing information about support services
<b>MAJOR THEME - THE SUPPORT SERVICES</b>	<b>ALL DATA THAT REFERS TO THE SPECIFICS OF EPS SERVICES; ACCESS, TIMING, CONTENT, FORMAT,</b>
Accessing the Support Services	Issues of access to early parenting support services; awareness, referral,
BF Services	Data referring to BF services, at the hospital or in the community
Classes	Provision of information in a formal group format, from conception until the baby is 12 months old
Prenatal Classes	Data referring specifically to prenatal classes
Clinician knowledge of support services	Clinician knowledge of support services
Early Parenting Support Services	Formal early parenting support; classes in-hospital, day-stay, residential,
Midwives	Hospital Midwives
Tresillian Karitane	Community early parenting services
ECHC	Early Childhood Health Centre – community
Drop-in	Drop-in clinic at the community health centre
Mothers' Group	Peer-support group organised by the community health centre
Mother's Group (Focus Group Consensus)	Focus Group Consensus on peer-support group organised by the community health centre

Node Name	Node Description
ECHC - ESL / CALD	Community health centre services for women who have English as a second language or who are culturally diverse
Family Support	Informal social support
General Practice or Paediatrician Support	Medical Doctor, practice nurse, chemist nurse or privately practicing nurse practitioner / mental health nurse
GP for emotional psychological support	Family physician who provides psychological support
GP Support for premi	Family physician who provides support for premature babies
GP Support for twins or multiples	Family physician who provides support for women with multiples
Relationship with GP	Family physician who provides support
Hospital Provided Early Parenting Support Services	Formal early parenting support; classes in-hospital, day-stay, residential,
In-home EPSS	Early parenting support services provided by the hospital in the woman's home
In-patient feeding and settling classes	Classes that women attend during their stay in the hospital to support infant feeding and settling
Lactation Consultants	In hospital, outpatient or community lactation consultation
Midwives at the hospital providing EPSS	Hospital midwives that provide support for new parents
Sleep Consultant	Sleep 'specialists' either with or without qualifications
Socialisation	Socialisation with other new mothers

Node Name	Node Description
Telephone support	Telephone parenting help-line
In-home services	Ancillary services provided in the woman's home such as meals or cleaning
New Services	New services, hospital and community
Online EPS Services	Early parenting support services that can be accessed via the internet, such as Raising Children Information site
Tresillian	Tresillian Early Care Centres that provide inpatient, day stay and in-home early parenting support services
Tresillian services - FOCUS GROUP CONCENSUS	Examples of where the clinicians shared information with each other during the focus group
<b>MAJOR THEME - THE WOMAN</b>	<b>THE MAJOR THEME IN REGARD TO THE COMPLEXITY OF THE WOMAN AND HER EXPECTATIONS</b>
Complexity of Woman	Complexity of the woman's situation, history, diagnosis, finances or family support,
Career Woman Expectations	Woman's expectations of her career, business or job
Complex Care for Baby	Issues of EPS services in regard to preterm baby, multiples and unwell baby
Maternal Age	Maternal Age
Social Isolation or CALD	Isolation or lack of social support / interaction due to immigration, nuclear family isolation or CALD
Unwell Woman	Physically or mentally unwell
Expectation	Belief, hope anticipation of baby or of parenting role
Expectation and Anxiety	Fear or worry about baby or of parenting role

Node Name	Node Description
Expectation and Confidence	Parenting confidence in baby or parenting role
Expectation Focus Group Consensus	Focus group consensus on parenting confidence in baby or parenting role
Expectation from technology or social media	Belief, hope or anticipation of baby or of parenting role developed from technology or social media
Expectation of Breastfeeding	Belief, hope or anticipation of baby feeding mothers milk
Expectation breastfeeding focus group consensus	Focus group consensus of belief, hope anticipation of baby feeding mothers milk
Expectation of classes	Belief, hope or anticipation of prenatal classes
Expectation of Normal Newborn Behaviour	Belief, hope or anticipation of baby's behaviour
Expectation Newborn focus group consensus	Newborn focus group consensus or parents belief, hope or anticipation of baby's behaviour
Expectation of Parenting	Woman's expectation of her role as new parent, transition to parenthood ...
Expectation of Sleep and settling	Parents belief, hope or anticipation of baby's sleep behaviour
Expectation of socialisation	Parents belief, hope or anticipation of socialisation with other new parents
Expectation Sleep or Fatigue or Rest	Parents belief, hope or anticipation of their own sleep / rest / fatigue
Expectation through Comparison	Comparing baby to others in group

Node Name	Node Description
Informal Support	Support provided by family and friends
Informal support from family	Support provided by family
Informal support from partner	Informal support from partner including co-parenting
Informal Support in form of Mothers' Group	Support provided by other new mothers
Parenting Confidence	Belief in parenting skills
Perception of Baby or Parenting	Awareness of own baby or of parenting role

## Appendix 16 – Ethics Approval

**Sent:** Research.Ethics@uts.edu.au <Research.Ethics@uts.edu.au>  
Monday, 3 April 2017 5:33 PM  
**To:** Cathrine.Fowler@uts.edu.au, Deborah.J.Sims-1@student.uts.edu.au,  
Research.Ethics@uts.edu.au  
**Subject:** HREC Approval Granted - ETH16-0839

Dear Applicant

Thank you for your response to the Committee's comments for your project titled, "Early Parenting Support Services for Women Who Gave Birth in a Private Hospital: A Mixed-Methods Study". Your response satisfactorily addresses the concerns and questions raised by the Committee who agreed that the application now meets the requirements of the NHMRC National Statement on Ethical Conduct in Human Research (2007). I am pleased to inform you that ethics approval is now granted.

Your approval number is UTS HREC REF NO. ETH16-0839.

Approval will be for a period of five (5) years from the date of this correspondence subject to the provision of annual reports.

Your approval number must be included in all participant material and advertisements. Any advertisements on the UTS Staff Connect without an approval number will be removed.

Please note that the ethical conduct of research is an on-going process. The National Statement on Ethical Conduct in Research Involving Humans requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually from the date of approval, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

You should consider this your official letter of approval. If you require a hardcopy please contact Research.Ethics@uts.edu.au.

To access this application, please follow the URLs below:

\* if accessing within the UTS network: <https://rm.uts.edu.au>

\* if accessing outside of UTS network: <https://vpn.uts.edu.au>, and click on " RM6 – Production " after logging in.

We value your feedback on the online ethics process. If you would like to provide feedback please go to: <http://surveys.uts.edu.au/surveys/onlineethics/index.cfm>

If you have any queries about your ethics approval, or require any amendments to your research in the future, please do not hesitate to contact Research.Ethics@uts.edu.au.

Yours sincerely,

Associate Professor Beata Bajorek  
Chairperson  
UTS Human Research Ethics Committee  
C/- Research & Innovation Office  
University of Technology, Sydney  
E: Research.Ethics@uts.edu.au

14 June 2017

Mrs Deborah Sims  
[Redacted]  
[Redacted]

Via Email: [Redacted]@bigpond.com

cc:

Dear Mrs Sims,

**HREC Reference number: NSPHEC 2017-LNR-006**  
**Project title: Early Parenting Support Services for Women Who Gave Birth in a Private Hospital**

Thank you for submitting the above research project for ethical review. This project was considered by the North Shore Private Hospital Ethics Committee Chair.

I am pleased to advise you that the NSPH Ethics Committee has granted ethical approval for this research project.

The reviewed documents include:

Document	Version	Date
Cover Letter		26 May 2017
NSPHEC LNR Application Form		26 May 2017
Study Protocol		15 May 2017
Participant Information Sheet and Consent Form		30 Mar 2017
Consent Form – Clinician Focus Group		30 Mar 2017
Participant Invitation Poster		15 May 2017
Application Fee payment		26 May 2017
UTS Ethics Approval Letter		3 Apr 2017
UTS Supervisor Letter		26 May 2017
Letter of support from NSPH DCS		20 Dec 2016

Letter of support from NSPH Maternity		20 Feb 2017
Curriculum Vitae – Deborah Sims		15 May 2017
Corrected consent form (admin)		5 Jun 2017
Corrected consent form (clinicians)		5 Jun 2017

Approval of this project by the NSPH Ethics Committee is valid from 14 June 2017 to 13 June 2020 subject to the following conditions being met:

- The Principal Investigator will immediately report anything that might warrant review of ethical approval of the project.
- The Principal Investigator will notify the Ethics Committee of any event that requires a modification to the protocol or other project documents and submit any required amendments in accordance with the instructions provided by the HREC.
- The Principal Investigator will notify the Ethics Committee of any plan to extend the duration of the project past the approval period listed above and will submit any associated required documentation.
- The Principal Investigator will complete and submit the mandatory NSPH Ethics Committee annual report form in a timely manner and submit a final report on completion of the study in the specified format.
- The Principal Investigator is responsible for reviewing the NSPH Ethics Committee Terms of Reference and adhering to all requirements outlined.

Should you require any further information, please contact the Ethics Committee Secretary on (Phone) 8425 3037 or via (Email) at [EthicsCommittee.NSP@ramsayhealth.com.au](mailto:EthicsCommittee.NSP@ramsayhealth.com.au).

The North Shore Private Hospital Ethics Committee wishes you every success in your research.

Yours faithfully,

Production Note:  
Signature removed  
prior to publication.

**Dr Garth I Leslie**  
Chairman, NSPH Ethics Committee

*This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) National Statement on Ethical Conduct in Human Research (2007).*

30 August 2017

Ms Deborah Sims RN  
[Redacted]  
[Redacted]

Dear Ms Sims

**AHCL HREC Project ID:** 2017-009

**AHCL SSA Reference:** AU/7/774E27 dated 30 May 2017

**Project Title:** A mixed methods explanatory sequential analysis to describe early parenting support services for women who gave birth in a private hospital.

Thank you for submitting an application for site authorisation of the above research project. I am pleased to advise that the Adventist HealthCare Limited Chief Executive has granted authorisation for the research to take place at the following site/s.

- Sydney Adventist Hospital

While site authorisation has been granted you are required to negotiate individual arrangements regarding commencement of the research with Dr Jeanette Conley, Medical Executive, ([jeanette.conley@sah.org.au](mailto:jeanette.conley@sah.org.au) or ph: 9487 9401).

The documents approved for use are:

Document Title
Study Protocol dated 20 Dec 2016
Postnatal Women PICF V002 20 Jun 2017
Clinicians PICF V002 20 Jun 2017
Administrators PICF V001 25 Jul 2017
Postnatal Women Questions 21 Mar 2017
Clinician Interview Questions 21 Mar 2017
SSA Form AU/7/774E27 dated 30 May 2017

In compliance with the *Guidelines for Good Clinical Research Practice (GCRP) in Australia* and the requirements of Adventist HealthCare Limited, the Chief Investigator is responsible to ensure that the following conditions are met. These conditions are in addition to those conditions imposed by the Human Research Ethics Committee that granted ethical approval:

1. Proposed amendments to the research protocol or conduct of the research which may affect the ongoing site acceptability of the project, are to be submitted to this office.

2. Where appropriate, it is recommended that you consult your insurer to ensure that you are adequately covered for the purposes of conducting this study.
3. It is the responsibility of the Principal Investigator to ensure a current certificate of insurance is maintained by this office at all times. Failure to provide evidence of current insurance will result in site authorisation being withdrawn.
4. Where applicable, it is the responsibility of the Principal Investigator to ensure that the Manager, Medical Records is advised of the required retention period of AHCL medical records. The standard medical record destruction period of 7 years will apply if alternate arrangements are not made.
5. Site authorisation will expire on the date that ethical approval, granted by the AHCL HREC, expires.

Yours sincerely

Production Note:

Signature removed  
prior to publication.

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