

The Breastfeeding Experience of Mothers in Postnatal Hospital Environments: An Ethnographic Study

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the degree of

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Certificate of Original Authorship

I, Susanna Irene Scurry declare that this thesis, is submitted in fulfilment of the requirements for the award of Master of Midwifery (Research), in the School of Nursing and Midwifery, 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. This research is supported by the Australian Government Research Training Program.

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“Where, after all, do universal human rights begin? In small places, close to home – so close and so small that they cannot be seen on any maps of the world. Yet they are the world of the individual person; the neighbourhoods he lives in; the school or college he attends; the factory, farm, or office where he works. Such are the places where every man, woman, and child seeks equal justice, equal opportunity, equal dignity without discrimination. Unless these rights have meaning there, they have little meaning anywhere. Without concerted citizen action to uphold them close to home, we shall look in vain for progress in the larger world.”

Eleanor Roosevelt

United Nations 1958

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LIST OF TERMS

Caesarean Section C/S: an elective or emergency surgical procedure used to deliver a baby through an incision in the abdomen and uterus.

Multigravid (Multi): A term given to a woman who has had more than one pregnancy.

Normal Vaginal Birth (NVB): A natural spontaneous vaginal birth at term without routine medical interventions and pain medications.

Primigravid (Primi): A first time pregnant mother.

Post-Partum Haemorrhage (PPH): Blood loss at birth greater than 500mls.

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Abstract

Up to 90% of Australian infants commence breastfeeding in hospital but by one month of age exclusive breastfeeding rates drop to 61.4%. This change suggests that postpartum care fails to meet the longer-term breastfeeding needs of new mothers and infants. Very little research has considered the kind of postnatal hospital accommodation that women experience as having an impact on the initiation and maintenance of breastfeeding. The aim of this study was to explore the influence of the hospital postnatal physical environment on the breastfeeding experiences of new mothers.

A qualitative ethnographic study using observations, field notes, reflective diary, photographs and semi-structured interviews took place in a tertiary-referral, Baby Friendly Health Initiative accredited hospital in New South Wales, Australia. Observations of women and infants accommodated in typical postnatal rooms (single or shared 4-bed rooms) took place, day and night. Semi-structured interviews were undertaken with 10 women and six partners located in either single or shared 4-bed rooms, to discuss their experiences of breastfeeding in their allocated postnatal environment.

Thematic analysis of the data revealed two main themes, "Being on guard" and "Building a nest", each comprising three subthemes. "Being on guard", described how women in shared rooms experienced breastfeeding in a cubicle surrounded by curtains that could be opened at any time, leaving them exposed. The subthemes, "You just feel the noise", "Behind the curtains" and "Babies at the desk", described how women were unable to rest due to high activity and noise levels, an inability to turn down the lights, and unable to have the support of a partner in sharing the care of their baby, particularly overnight. Women were stressed and in a constant state of high alert, which is counterproductive when breastfeeding. The opposite situation occurred for women in single rooms who did not need to be on guard. "Building a Nest" described how women in both single and shared rooms endeavoured to build a quiet, restful and

supportive family space, a nest, in which to initiate breastfeeding. The subthemes, “Space for a supporter to stay”, “Feeling protected and private” and “Furnishings to support breastfeeding” revealed how physical boundaries enhanced privacy, rest, physical and emotional support, critical elements supportive of breastfeeding.

There is an urgent need to implement the Australasian Maternity Health Facility guidelines published by the Australasian health infrastructure alliance in 2017, which recommends postnatal women and families are accommodated in single rooms to be supportive of the needs of breastfeeding women.

Chapter 1: Introduction

Introduction

This thesis explores the breastfeeding experience of new mothers, when accommodated in the postnatal hospital environment of a publicly funded tertiary referral hospital that has been awarded Baby Friendly Health Initiative (BFHI) accreditation. Being BFHI-accredited means that the hospital is recognised as providing optimal breastfeeding support for mothers and their infants. This thesis considers how the design of the postnatal hospital environment accommodates and supports the experience of breastfeeding. This opening chapter introduces the topic of breastfeeding and the BFHI and establishes the importance of the body of breastfeeding research to which this thesis contributes. The chapter also considers how and where new mothers and their infants are accommodated in maternity facilities at the commencement of breastfeeding, which is critical to breastfeeding duration and successful outcomes.

Background to the study

Breastfeeding is well recognised as the optimal nutrition for infants, and it is also lifesaving. The health benefits are immediate and persist until later in life. This is not new knowledge, as evidenced by the insightful statement by Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO) who said, *“Breastfeeding gives babies the best possible start in life... Breastmilk works like a baby’s first vaccine, protecting infants from potentially deadly diseases and giving them all the nourishment they need to survive and thrive”* (World Health Organisation 2017). Furthermore, both the WHO and the United Nation’s International Children’s Fund (now the United Nations Children’s Fund) (UNICEF), and the Innocenti Declaration, recommend initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, and continued breastfeeding with the introduction of appropriate complimentary foods for two years or more (World Health Organization 2003).

The Lancet series on breastfeeding estimated that the lives of 823,000 children, and 20,000 mothers worldwide, could be saved each year through universal breastfeeding, together with an estimated US\$300 billion worth of economic savings (Hansen 2016). Therefore, the importance of the focus in this thesis on environments that support breastfeeding, is well justified.

Within Australia, until the 1980s, little attention had been paid to the value of women's contribution in giving labour and time to breastfeeding which was considered free and overlooked in the economic equation (Smith & Forrester 2013). New Zealand economist Maralyn Waring challenged this view when launching "Counting for Nothing" at the Australian Lactation Consultants Association breastfeeding conference in 2000. Economist Julie Smith presented evidence at the 2007 Parliamentary Inquiry into breastfeeding, establishing its cost saving and protective effects (House of Representatives standing committee on Health and Aging 2007). Smith's presentation at the inquiry included evidence from an early study conducted in one Australian maternity hospital that found there were significant hospital costs associated with early weaning (Smith, Thompson & Ellwood 2002). This analysis considered four illnesses including gastroenteritis, necrotising enterocolitis, eczema and type 1 diabetes. These four illnesses added an estimated \$1 to \$2 million annually to hospitalisation costs. When extrapolated across the Australian hospital system, costs could be estimated at \$60 to \$120 million for these illnesses alone (Smith, Thompson & Ellwood 2002). Another economic analysis of breastfeeding presented to the inquiry found that a minimum of \$11.75 million could be saved if the prevalence of exclusive breastfeeding at just three months was increased from 60 percent to 80 percent (Drane 1997; House of Representatives Standing Committee on Health and Aging 2007).

There are many benefits of breastfeeding cited in the literature. Exclusive breastfeeding is not only sound economically but also, importantly, protective of new mothers initially and into older age. Breastfeeding immediately following birth reduces

the risk of postpartum haemorrhage (Saxton et al. 2015), and may help women return to their pre-pregnant birth weight (Jarlenski et al. 2014). Delayed ovulation and amenorrhoea as a consequence of breastfeeding allows women to space their pregnancies while being protective against premenopausal breast and ovarian cancers (Linnecar et al. 2014; Franca-Botelho et al. 2012).

Breastfeeding is also environmentally friendly (Linnecar et al. 2014). It reduces the impact of the dairy industry on the environment and the significant use of water required to produce cow's milk derived baby milk powders (Dadhich et al. 2021). Breastfeeding reduces waste from feminine hygiene products through delayed menses, packaging from infant formula, bottles and teats and problems of waste disposal (Dadhich et al. 2021; Linnecar et al. 2014).

As well as compelling economic, environmental and health reasons for supporting and promoting breastfeeding there is also a political imperative to address since Australia is a founding member of the United Nations and signatory to the Universal Declaration of Human Rights and the Convention of the Rights of the Child (United Nations General Assembly 1948, 1989). As a signatory to these agreements, Australia has a responsibility to uphold the targets of the Sustainable Development Goals (SDG) which were revised by the 65th World Health Assembly of the World Health Organization (World Health Organization 2014). Maternal, Infant and Young Child nutrition targets to 2030 were endorsed and included increasing the rate of exclusive breastfeeding in the first 6 months up to at least 50% of all infants (World Health Organization 2014).

One initiative contributing to the SDG is the international Baby Friendly Hospital Initiative (BFHI) which was adopted in Australia in 1992 and changed its name to the Baby Friendly Health Initiative in 2006 (Atchan, Davis & Foureur 2013, Atchan, Davis & Foureur 2017a). At the WHO Country Co-ordinators meeting of Industrialised nations for the BFHI, which I attended in 2010 and 2014, the importance of the BFHI, in meeting the WHO infant feeding targets for infants under the age of five years was emphasised, and included to:

1. “Achieve a 40% reduction in the number of children under 5 who were stunted,
2. Achieve a 50% reduction of anaemia in women of reproductive age,
3. Achieve a 30% reduction of low birth weight infants,
4. Have no increase in childhood overweight,
5. Increase exclusive breastfeeding rates in the first six months of life to at least 50%
6. Reduce and maintain childhood wasting to less than 50%” (World Health Organization 2014).

In a review of progress in the transition from the Millennium Development Goals (MDGs) to the SDGs the authors of a report concluded with a summary of why and how a focus on maternal and child health in the post-2015 era should be maintained (Gaffey, Das & Bhutta 2015). The importance of early breastfeeding initiation within 24 hours was shown to decrease all-cause neonatal mortality and infection-related neonatal mortality (Gaffey, Das & Bhutta 2015). The authors stated that globally only 43% of newborns began breastfeeding within one hour of birth and only 39% of infants were exclusively breastfed to the WHO recommendations (Gaffey, Das & Bhutta 2015). Such low rates of meeting the MDGs suggested further research into the early postpartum period was needed to facilitate a greater understanding of the optimum environment to initiate and sustain breastfeeding. The Australian National Breastfeeding Strategy endorsed the vital importance of breastfeeding for long term health outcomes, stating:

“Nutrition in the first 1000 days is one of the most significant factors that influence child health and development. The nutritional status of the mother and/or child is a critical factor in ‘programming’ the child for healthy development and positive long-term health and wellbeing outcomes” (Department of Health and Aging 2019, p 9).

Therefore, the study presented in this thesis considers an important area of health research and is well justified.

My interest in the area

In 1970 I spent a year as a Rotary exchange student in Southern Mindanao, in the Philippines. It was there I saw how corruption by baby milk manufacturers

undermined breastfeeding adding to the health burden of families and inequality within society. From 1976 until 1978 I worked as a general nurse in Papua New Guinea. It was during that time I saw babies and mothers die, many from lack of breastfeeding. It was also in Papua New Guinea we discovered a container of contaminated powdered baby milk shipped from Australia to Kimbe, West New Britain. I was alerted to the contaminated product as the batch numbers were published in a Melbourne newspaper and sent to me from Australia by a family member, aware I was using this product to feed my toddler.

In Papua New Guinea I became aware of breastfeeding as a human rights issue while working with a pediatrician from WHO, promoting the public health “Susu bilong mama” (breastfeeding) program. It was in Papua New Guinea that I applied to study midwifery, wanting to be with birthing women.

Prior to leaving Australia my partner and I had a negative birth experience which left us shattered and resonate with this statement from the Respectful Maternity Care Charter:

“Women’s memories of their childbirth experiences and the treatment of their newborns stay with them for a lifetime, and are often shared with other women, contributing to a climate of confidence or doubt around the healthcare system”. (White Ribbon Alliance 2011)

I have worked since then as a midwife and became a lactation consultant and Baby Friendly Health Initiative Assessor/educator in 2005.

In my lactation role on the postnatal ward I have noticed women accommodated within shared postnatal rooms leaving hospital before resolving breastfeeding issues. This appears to be because they are dissatisfied with the shared hospital environment and, in particular, the fact that this requires them to be separated from their families. This issue was made clearer to me a few years ago when one such dissatisfied new mother wrote to our local newspaper to express her distress about the environment in which she found herself and her newborn baby. Her published, ‘Letter to the Editor’, is quoted here to illustrate many of the key aspects of her experience that led to the impetus to

undertake this formal research of the postnatal hospital environment and breastfeeding women.

Natalie Cameron wrote:

“RECENTLY I had my first baby at the John Hunter Hospital. I stayed in the postnatal ward after the birth for two nights in a four-bed ward with my son and three other women and their babies. Like most new mothers I was tired and sore following the labour.

The midwives helped me but were often busy with other mothers who had had surgery to have their babies. Curtains separated the four beds but did not stop the light or noise from other babies crying, visitors, or hospital staff attending the other women and their babies.

It stressed me when my son cried and disturbed the other women during the night and I left hospital quickly because I got no rest during my stay.

Having our son was a very special time and the cramped ward did not have space for my partner or a family member to stay and help me overnight, which I would have liked. Not all women are fortunate enough to go home immediately after birth and need professional care, and a quiet space to allow privacy, rest and recovery.

The staff try very hard to provide good care. Sadly, they are let down by the environment they have to work in.” (Newcastle Herald, Letters to the Editor 21 September 2017).

When Natalie subsequently had her second child, she was able to breastfeed according to the WHO recommendations by leaving hospital within several hours of birth and with the help of a lactation consultant at home.

As a lactation consultant and BFHI Assessor/Educator I was concerned at the disparity in opportunity and breastfeeding outcomes of women in single rooms, compared with women in shared rooms. Without an adequate number of single rooms where women can rest and receive evidence based breastfeeding support in hospital or ongoing

breastfeeding support at home, BFHI will not succeed. I have observed that following a busy night shift when working in the shared rooms, distressed women will leave hospital within the second 24 hours following birth telling me that despite having sore nipples or not having enough milk, they miss their partners. They also say they would get more rest and family support at home. If a single room becomes available where a partner or family member can stay, they will remain.

The Baby Friendly Health Initiative (BFHI)

In order to fully describe the founding concepts underpinning the research presented in this thesis it is important to begin with the BFHI, and “The Ten Steps to Successful Breastfeeding,” (World Health Organization & UNICEF 2018), as described in Table 1.1.

The design and implementation of the BFHI was intended as an evidence-based quality assurance tool aimed at improving breastfeeding rates at international, national and local levels. Introduced into Australia in 1992 and now managed locally by the Australian College of Midwives, the BFHI is an integral component of providing high-quality care to mothers and babies in this country to support breastfeeding. Despite twenty-two recommendations arising from the Parliamentary inquiry into breastfeeding more than a decade ago (House of Representatives 2008), breastfeeding and BFHI still receive little support and it is left predominantly to women, who are underrepresented within positions of decision making, to ensure breastfeeding issues are brought to the table (Atchan, Davis & Foureur 2017a; Smith & Forrester 2013; House of Representatives 2008).

The Ministry of the New South Wales (NSW) Health Department has mandated BFHI be implemented into NSW hospitals, as have most other Australian states (NSW Health 2018). To be a BFHI accredited hospital “The Ten Steps to Successful Breastfeeding program” must be practised while the WHO Code for marketing breast milk substitutes (World Health Organization 1998) is adhered to (Australian College of Midwives 2018). BFHI aims to reduce barriers to breastfeeding such as routine practices which may

separate mothers from their infants and, create a more enabling environment in which a mother–baby dyad can establish lactation (Australian College of Midwives 2018).

Table 1. 1: The Ten Steps to Successful Breastfeeding (World Health Organization & UNICEF 2018)

Critical management procedures	
1a	Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions
1b	Have a written infant feeding policy that is routinely communicated to staff and parents
1c	Establish ongoing monitoring and data-management systems
2	Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding
Key clinical practices	
3	Discuss the importance and management of breastfeeding with pregnant women and their families
4	Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth
5	Support mothers to initiate and maintain breastfeeding and manage common difficulties
6	Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated
7	Enable mothers and their infants to remain together and to practise rooming-in 24 hours a day
8	Support mothers to recognise and respond to their infants' cues for feeding
9	Counsel mothers on the use and risks of feeding bottles, teats and pacifiers
10	Coordinate discharge so that parents and their infants have timely access to ongoing support

While totally supporting the goals and implementation of the BFHI and the Ten Steps, one aspect of the initiative that has received little attention is the impact of Step 7, in particular, on the postnatal ward environment. The implementation of Step 7 resulted in two significant events. Babies within BFHI accredited hospitals were moved out of well-baby nurseries and became co-located with their mothers, next to the bedside. As a result, well-baby nurseries were no longer required to accommodate babies and were closed. The unintended consequence of closing well-baby nurseries has been the loss of nurses and/or midwives who staffed the nurseries and provided care for the infants

of unwell, medicated or fatigued mothers, and those who had experienced caesarean section surgery and needed assistance. The loss of the well-baby nursery has also meant the loss of a sound proofed area with facilities such as a bathing area or rocking chair where mothers with crying and unsettled infants could go to soothe their infant and not disturb resting women. How the closure of the well-baby nursery and the loss of nursery staff in the postnatal ward may have impacted the breastfeeding experience of mothers has not been formally studied. The research undertaken in this thesis addresses the current state of the physical postnatal environment in a maternity unit of a major publicly funded hospital, to examine how breastfeeding is experienced within the differing spaces offered for accommodation.

The focus of the research described in this thesis is on Step 7 of the “Ten Steps to successful Breastfeeding” as Step 7 requires maternity services to “enable mothers and their infants to remain together and to practise rooming-in 24 hours a day”. Rooming-in is described by the World Health Organization and UNICEF (2018) as a hospital practice where postnatal mothers with healthy infants (including those born by caesarean section) stay together in the same room 24 hours a day, from the time they arrive in the postnatal ward after birth until hospital discharge (World Health Organization & UNICEF 2018; Australian College of Midwives 2018). Mother and baby remain together unless there is a specific medical indication which warrants separation (World Health Organization & UNICEF 2018; Australian College of Midwives 2018). The rationale for this practice, known as “rooming-in”, is that by keeping the mother and infant together, the mother can learn to recognise her infant’s feeding cues and practise responsive breastfeeding. Frequent feeding or the regular expression of breast milk is critical immediately following birth and the first few days if an adequate milk supply is to be established (Baxter, Cooklin & Smith 2009; Bystrova et al. 2007; Hoban et al. 2018; Vehling et al. 2018; World Health Organization & UNICEF 2018).

Whilst highly desirable as a successful strategy to improve women’s ability to breastfeed, rooming-in also needs to be implemented in an environment that is suitable to support it. In the next section I briefly reflect on the history of

implementing rooming-in and on my experiences as a BFHI assessor that shed light onto why this has become an issue of concern for me.

I led the first BFHI assessment of the hospital in which this research is based, in 2006. After adapting the BFHI Policy to local conditions (Step 1), each of the remaining steps were addressed and implemented over a timeline with the support of midwifery managers. As demonstrated by Walsh, Pincombe & Stamp (2006), the steps under the control of midwifery managers, such as Steps 3 and 4, were more achievable than other steps such as Steps 2 and 10 (Walsh, Pincombe & Stamp 2006). As the hospital was a relatively new building, little could be done to address the postnatal ward design and lack of single rooms. The impact of rooming-in on the postnatal ward environment, and the closure of the night nursery, was sparsely researched at the time (Jaafar, Ho & Lee 2016). The mandatory nature of rooming-in saw infants introduced to the mothers' bedsides 24 hours a day without any changes to the space within the shared 4-bed rooms. With the benefit of hindsight, a pilot study to explore the impact of rooming-in 24 hours a day, and the impact of the night nursery closure on women and midwives, should have been undertaken.

A decade after the introduction of BFHI in Australia a survey was undertaken of 432 Australian hospitals providing maternity care seeking a response to a 55-item questionnaire about its implementation (APN Business Information Group 1998). The survey received a very high response rate with 90% (387) of facilities providing data. Responses revealed high rates of implementation of Steps 1-6, 8 and 9. The mean rate of women breastfeeding at discharge, from 283 responses, was 88%. The study recommended using the results to target the areas for improvements which included Step 7 (Walsh, Pincombe & Stamp 2006). This study showed a variety of practices that did not necessarily align with the institutions' agreement on Step 7. Although there was 100% agreement on the need for rooming-in practices, only 52% of hospitals utilised rooming-in all of the time, and 41%, most of the time. The authors suggested the low rate of rooming-in may have been due to the types of environments within hospital postnatal ward settings, which may have included a lack of single rooms contributing to rooming-in during the day time only (Walsh, Pincombe & Stamp 2006).

The lack of single rooms in postnatal ward environments may result in other impacts on breastfeeding. Australian maternity hospitals cater to many different ethnic groups and women from differing cultures (Figure 1.1), including 4.6% of women who identify as being of Aboriginal or Torres Strait Islander descent (AIHW 2019). Women from some different cultural backgrounds may expect their family members to be present to provide support during the 'lying-in' period after the birth of the baby. Since shared postnatal accommodation limits the number of visitors able to be present at any one time, without a single room to accommodate the inclusion and support of other family members, culturally appropriate care may be denied (Rice 2010).

In an older study of rooming-in preferences of two different groups of women (one group in a hospital in Brooklyn with a large African American population, and the other in a more affluent suburb of upstate New York in the United States), researchers found that due to differing cultural needs:

“it is as inappropriate to impose rooming-in on mothers as it is to deprive them of rooming-in” (Dharamraj et al. 1981).

Although this study is now thirty years old, the relevance of a woman's history and culture to her individual needs requires consideration. This was demonstrated in a more recent study of Asian women in Melbourne, Australia, where normal cultural practices were to allow the mother to rest following labour and birth while other women helped care for the baby (Rice 2010).

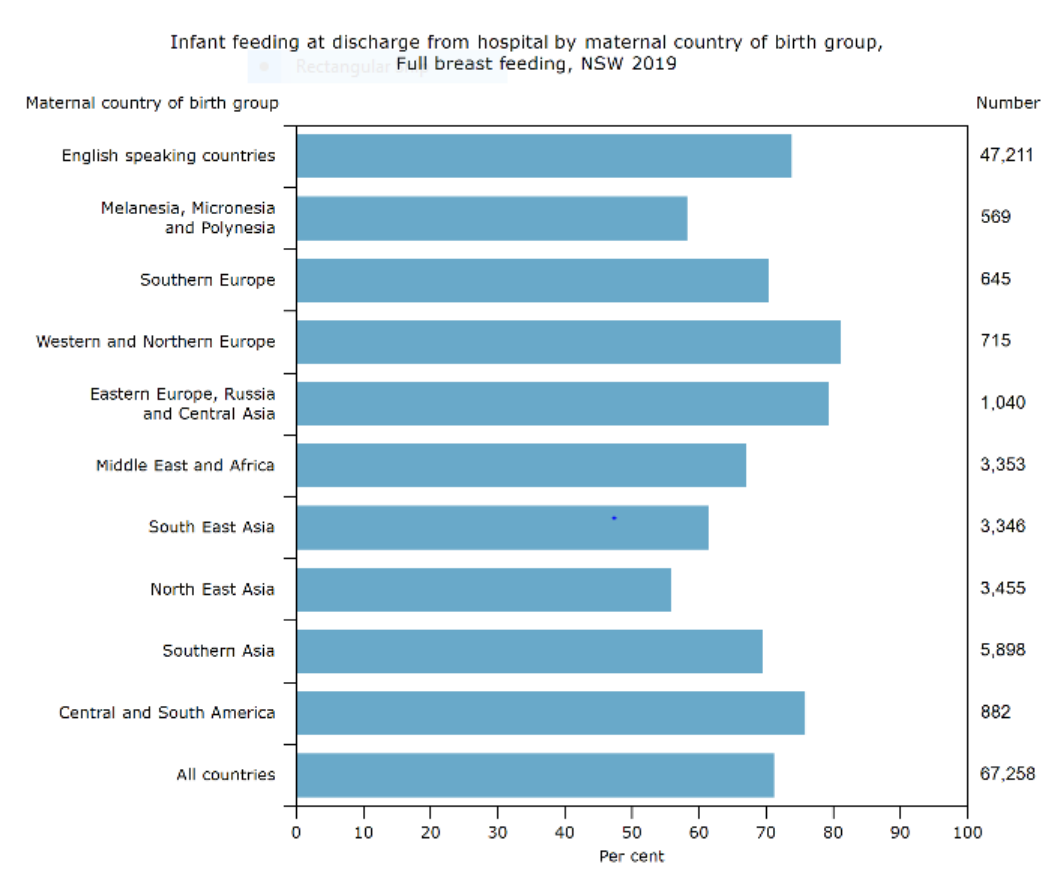


Figure 1. 1: Infant Feeding at hospital discharge by maternal country of birth group (NSW Government 2020)

NSW Health data demonstrates that having the ability to speak English may improve breastfeeding outcomes (Figure 1.1). With the increasing number of women giving birth in Australia having been born in non-English speaking countries (29.8% in 2020), having an environment supportive of culturally appropriate family care is of relevance (AIHW 2020). Within some cultures, for example in Pakistan, colostrum is discarded (Sohaila & Khaliq 2017). If a family member can remain during the hospital stay and receive evidence-based information, this knowledge maybe disseminated to support the mother when she goes home. For many families, first-time mothers and some cultural groups, not allowing a family member to remain is regarded as failing to provide appropriate support (Ellberg, Högberg & Lindh 2010; Hildingsson et al. 2009; Hildingsson 2007). Other studies have demonstrated fathers are dissatisfied to find that shared rooms do not allow them to remain following visiting hours have ceased (Hildingsson et al. 2009; Montigny & Lacharite 2004; Persson et al. 2012).

Breastfeeding, contrary to popular belief, is not natural but a learned skill, which requires knowledge, resilience and support (Avery et al. 2009; Daria 2011). Steps 2 and 3 of the BFHI require hospital staff, who care for mothers and infants, to have sufficient knowledge and skills to support breastfeeding. BFHI also requires staff to educate pregnant woman and their families about the importance and management of breastfeeding.

The BFHI steps require staff to enable immediate skin to skin contact of the mother and baby following birth. In addition regular breastfeeding, or expressing of breastmilk, to establish an adequate breast milk supply, is essential (Hoban et al. 2018). A postnatal ward environment that comfortably accommodates the woman, her baby and her family may be an essential component for increasing the rate of successful breastfeeding.

Breastfeeding Trends in Australia

There is a lack of uniformity and consistency of breastfeeding data within Australia despite an agreed response to recommendation one from the Parliamentary Inquiry into breastfeeding which stated that:

“The Department of Health and Aging coordinate and oversee the implementation of a national strategy to promote and support breastfeeding in Australia, including providing leadership in Australia, including providing leadership in the area of monitoring, surveillance and evaluation of breastfeeding data” (House of Representatives Standing Committee on Health and Aging 2008; p.4).

A 2010 baseline study of breastfeeding rates within Australia found that 96% of women initiated breastfeeding in hospital following birth (Australian Institute of Health and Welfare 2011) but, as Figure 1.2 indicates, using 2010 data, within one month from the time of birth, the exclusive and predominant breastfeeding rate had fallen substantially to 61.4% and to 15% by six months, well short of SDG targets (Australian Institute of Health and Welfare 2011).

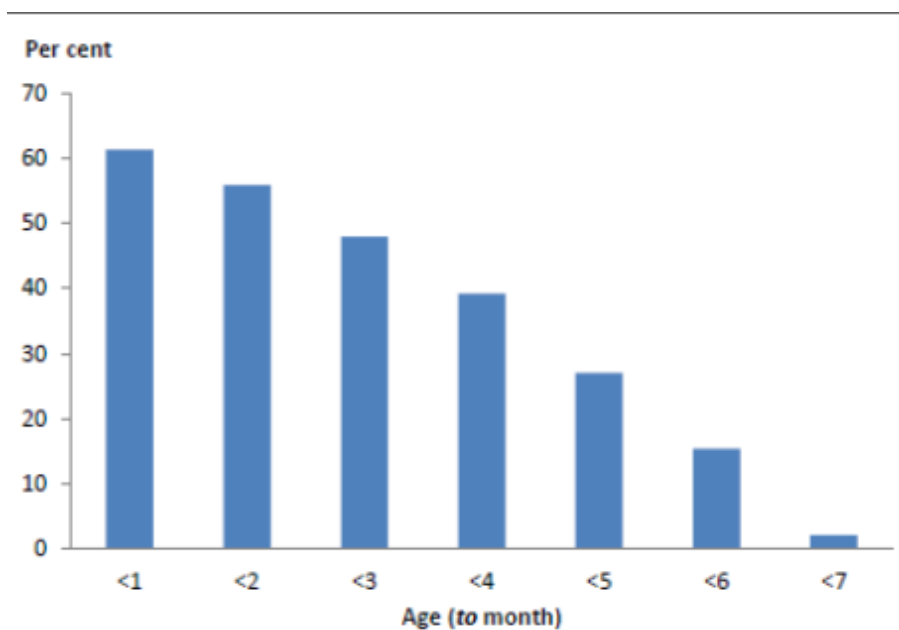


Figure 1. 2: Proportion of infants exclusively breastfed to each month of age.
(Australian Institute of Health and Welfare 2011).

There is regular collection of breastfeeding data at the State level at hospital discharge within NSW Hospitals as shown in Figure 1.3. This figure demonstrates the falling rate of exclusive breastfeeding between 2007 and 2019 in NSW and the rising level of partial breast and formula feeding. Partial breastfeeding and formula feeding have been demonstrated to have long term negative effects on subsequent breast milk production and breastfeeding duration (Kelly 2012; Klingaman 2009; O’Connor et al. 2018; Vehling et al. 2018).

Partial breastfeeding and formula feeding undermine breast milk production. Step 6 of the BFHI states; “Do not provide breastfed newborns any food or fluids other than breastmilk unless medically indicated” (World Health Organization & UNICEF 2018). The rationale is that when artificial milk is fed to the baby, the breast is not emptied. The lack of breast emptying disrupts the normal supply and demand interplay of the breasts, and the mother’s milk supply becomes reduced. This snowballs into further breast milk substitute feeding (World Health Organization & UNICEF 2018) with the long term effect of decreasing the rate of breastfeeding.

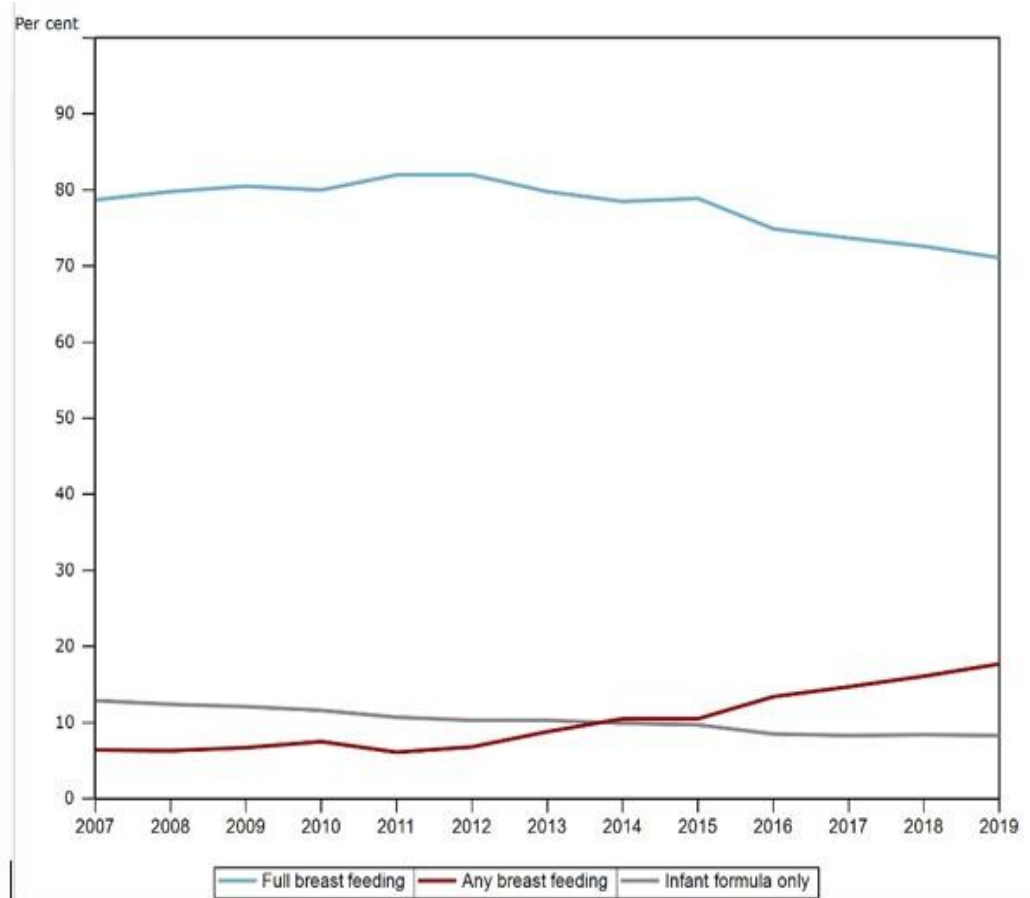


Figure 1. 3: Infant feeding trends in NSW 2007 to 2019 (NSW Government 2020)

Importantly, mothers who room-in with their infants feed their infants more often and have significantly less supplements than infants who do not room-in (Yamauchi & Yamanouchi 1990). In addition, these infants have significantly greater weight gain on day 7 and less neonatal jaundice compared to infants who do not room-in (Azad et al. 2018; Yamauchi & Yamanouchi 1990). Rooming-in is therefore important to facilitate breastfeeding and an adequate milk supply. Rooming-in alone is not sufficient to ensure successful breastfeeding, since the demands of frequent breastfeeding mean that a new mother gets little rest and requires additional support (Sheehan, Schmied & Barclay 2009). Fatigue and type of labour and birth may also impact on coping ability to care for the infant and breastfeed. Crucially, without this support, women are at risk of introducing artificial milk during the second 24 hours post birth due to the increased frequent feeding demands and possible nipple tenderness or pain (Buck et al. 2014, Yamauchi & Yamanouchi 1990).

Different types of health facilities and models of care may contribute to disparities in breastfeeding success. Figure 1.4 demonstrates breastfeeding rates within both the public and private maternity sectors within NSW. Exclusive breastfeeding rates are higher and the partial breastfeeding rates are lower in the public system compared to the private system. The reasons for this disparity are not clear although few private maternity facilities in NSW are BFHI accredited so may not be implementing the ten steps.

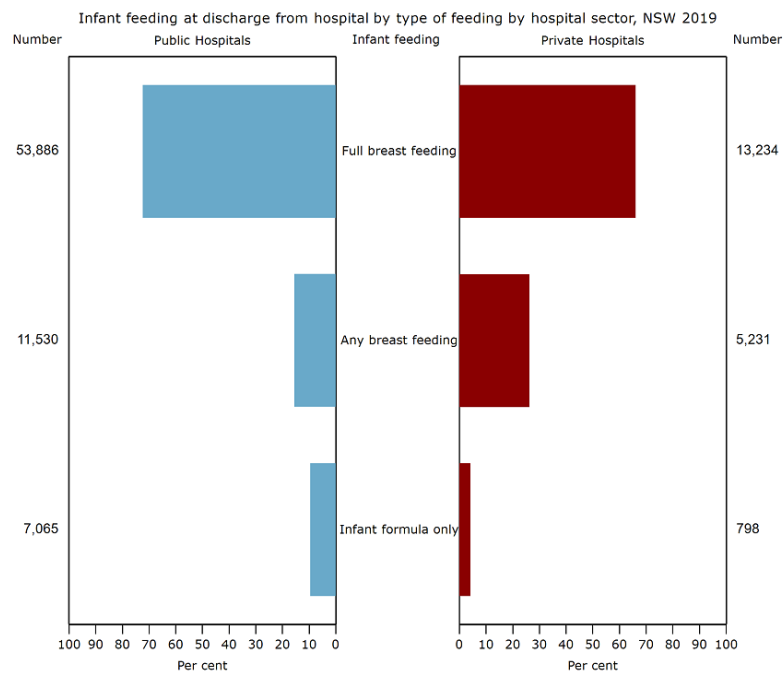


Figure 1. 4: Infant feeding at discharge from hospital by type of feeding by hospital sector (NSW Government 2020).

Across the state of NSW there is also evidence of a wide disparity in breastfeeding rates. As Table 1.2 demonstrates breastfeeding rates range from 84.1% in Northern NSW down to 59% in South Western Sydney (NSW Government 2020). There may be many factors contributing to this disparity that are worth investigating further. Whether the disparity is due to different socio economic or ethnic/ cultural groups, types of postnatal environments, BFHI status of hospitals in each area, breastfeeding support skills, workload of the midwives, length of postnatal hospital stay, or other unknown factors, are questions as yet inadequately answered in the literature.

Table 1. 2: Infant feeding at discharge from hospital by Local Health District, Full breastfeeding 2019 (NSW Government 2020)

Local Health Districts	Number	Per cent
Sydney	5,277	69.7
South Western Sydney	8,372	59.0
South Eastern Sydney	7,784	75.2
Illawarra Shoalhaven	3,392	75.0
Western Sydney	10,488	69.2
Nepean Blue Mountains	3,420	67.7
Northern Sydney	7,077	73.3
Central Coast	2,935	78.0
Hunter New England	7,902	74.8
Northern NSW	2,213	84.1
Mid North Coast	1,768	78.8
Southern NSW	1,160	81.2
Murrumbidgee	1,752	73.8
Western NSW	2,555	73.1
Far West	157	72.7
Other, not stated	1,006	73.3
All LHDs	67,258	71.1

As demonstrated in national (Figure 1.2), and state data from NSW (Figures 1.3 to 1.4 and Table 1.2), although there is a high initiation rate when commencing breastfeeding following birth, there is a wide disparity within the exclusive breastfeeding data at hospital discharge. Breastfeeding initiation rates have been shown to be consistently at around 90% or more, demonstrating that women do want to breastfeed (Australian Institute of Health and Welfare 2011; Hauck 2010; Kelly 2012). As the exclusive breastfeeding rate drops significantly within the first month following birth, a timeframe that includes the period of hospital admission and transfer from the hospital to home and community services, these data demonstrate a failure of optimal support of breastfeeding women during this time. This requires a deeper understanding and addressing.

A focus on the first month following birth and narrowing the focus even further to the first crucial days of establishing breastfeeding in hospital provides an opportunity to explore this issue. The initiation of breastfeeding immediately following the birth of the baby occurs in the privacy of the birth room or in the operating theatre where skin-to-skin is mandatory in BFHI accredited units. The woman is then transferred with her

baby to a postnatal area. My experience of many maternity units is that the postnatal environment varies greatly, and my informal impression is that this may have a significant impact on optimal breastfeeding support.

The role of the postnatal hospital-built environment

Historically, women birthed at home and were cared for by other women or midwives (Marchant 2010; Ehenreich & English 1985). For a range of well debated reasons, in the 1930s women began to move into hospitals for birth and postnatal care for up to two weeks (Barclay 2008). The postnatal ward design, in most maternity facilities, was based on the design of the acute medical or surgical hospital wards which originated from the United Kingdom and were introduced into Australia during the early settlement of the NSW colony by Lucy Osborn, a pupil of Florence Nightingale, at the request of the Governor of NSW (Image 1.0).

Since that time, postnatal accommodation has evolved. Historically, where women stayed following birth was based on the women's ability to pay, at least in well-resourced countries. Women with private health insurance could choose to have a private single room. Those without private insurance were usually allocated a shared two or four bed postnatal room. All healthy, full-term babies were cared for in a nearby nursery, at least overnight and sometimes for periods during the day. The babies were brought from the nurseries to the mothers at regular intervals for feeding. Today, the nurseries have been removed from BFHI accredited maternity facilities and rooming-in 24 hours a day is mandatory for well mothers and infants. Unwell infants are separated and cared for within neonatal units while the care of healthy infants of unwell mother's maybe problematic without family to help if midwives are busy.

Rooming-in aims to enable the mother to recognise the baby's needs and feeding cues and has been shown to increase the number of breastfeeds in a 24-hour period (Bystrova et al. 2007; Yamauchi 1990), both leading to increased milk volume and improved breastfeeding outcomes (Azad et al. 2018; Bystrova et al. 2007; Vehling et al. 2018; Yamauchi 1990). However, as described in the following section, over the last two decades, the nature of childbirth has changed which has potentially undermined

the goal of rooming-in. These changes also suggest the postnatal environment is no longer suitable to support breastfeeding.



Image 1.0 Crown Street, Women’s hospital Maternity ward, (City of Sydney Archives, 2020)

Changing nature of birth

Within NSW in 2001, 65.4% of women had a normal vaginal birth compared to 23.5% of women having a caesarean section (Figure 1.5), (AIHW 2018). Eighteen years later the data show 53% of women had a normal vaginal birth compared to 35.1% of women having a caesarean section (NSW Government 2020). These changes in the type of births experienced by women have implications for the postnatal experience and the experience of breastfeeding.

In postnatal wards, breastfeeding support is mainly the responsibility of midwives and lactation consultants. A Victorian study of private hospitals, demonstrated in key informant interviews of midwife managers and obstetricians, that the role of obstetricians in postnatal care was relatively minor with midwives taking charge (Rayner et al. 2010). A brief daily visit of the women by the obstetricians occurred and the obstetricians were available if medical care was needed (Rayner et al. 2010). Both

the midwives and obstetricians stated they deferred to the midwives or lactation consultants when asked about breastfeeding (Rayner et al. 2010).

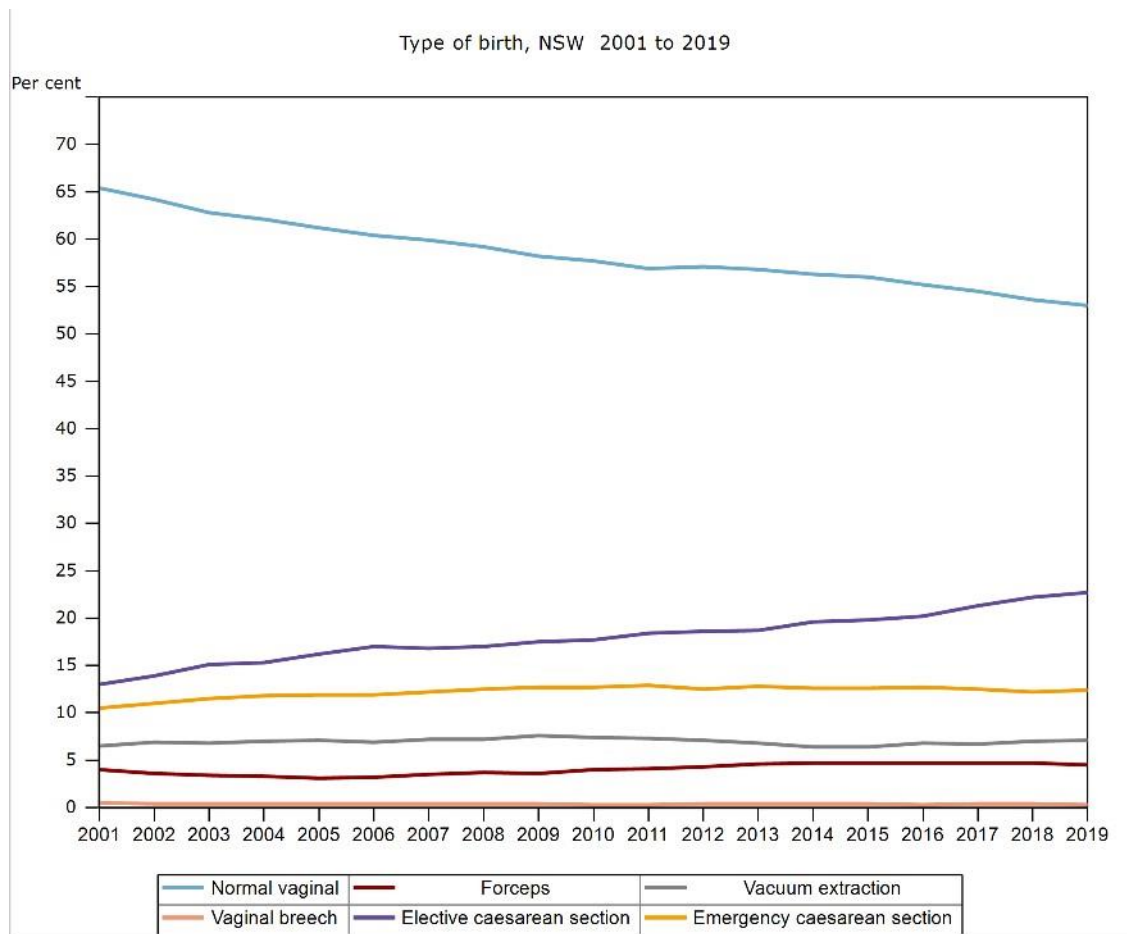


Figure 1. 5: Type of birth in NSW 2001-2019 (NSW Government 2020)

With one in three women having a caesarean section, the demands on midwives and family to help with baby care and breastfeeding have increased during the post-operative period. For example, the caesarean surgery and postoperative pain and/or analgesia impact the mother’s ability to care of herself or her infant. The anaesthetic takes time to wear off, while rendering the mother unable to provide skin to skin contact and care for her infant safely alone. The analgesia may make the mother drowsy or the pain may affect mobility for several days (O’Connor et al. 2018). Additionally, the compulsory post-operative indwelling urinary catheter and intravenous infusion can impact the mother’s ability to move easily which impedes her ability to care for her baby and to breastfeed.

Babies who have been born by caesarean section and their mothers may experience breastfeeding difficulties, due to the lack of expulsion of amniotic fluid and mucus from the gut (Klingaman 2009). These babies are prone to gagging and vomiting and may not want to suck at the breast within the first 24-48 hours following birth (Klingaman 2009). Compared to women and infants having a normal vaginal birth, a caesarean birth disadvantages both the new mother and infant and is a recognised cause for reduced breastfeeding (Department of Health and Aging 2019; Kelly 2012; Klingaman 2009; McGovern et al. 2006).

In the labour/ birth room the mother most often receives one-to-one care by midwives and family. While in the operating theatre/recovery room the new post caesarean mother and infant are cared for by numerous health professionals often with the partner present. Care in the postnatal ward falls to a midwife who may have up to six mothers and babies to support. It is also important to consider with increasing numbers of surgical births, women who remain in hospital are more likely to have underlying medical, surgical, or obstetric complications and may require additional care.

The increasing rate of women giving birth surgically and a growing number of mothers with co-morbidities is resulting in additional postnatal care needs. Wide disparities in breastfeeding rates and falling breastfeeding rates within the first month following birth demonstrate a need to re-evaluate postnatal care. The (then) Chief Nurse and Midwifery Officer, Rosemary Bryant, who led the Australian review into Maternity Services in 2009, stated there was a lack of an evidence base to guide health workers in the provision of early postnatal care. Furthermore, she stated that it was crucial that new mothers were supported during the postnatal period (House of Representatives standing committee on Health and Aging 2009). How the differing postnatal environments in hospital facilitate the integration of the new mother's partner and helpers into her care, which may better support breastfeeding in hospital and within the community upon hospital discharge, as Bryant (2009) recommended, appears a worthwhile research project.

Within the organisational structure of some public hospitals where single rooms are limited, they are usually prioritised to those women with the highest clinical needs.

These include women who have given birth to multiple infants and need extra space for cots and family to help, or those with an infection who may need separation from others. Women who are privately insured and can pay for a single room are also prioritised. This prioritisation results in the majority of women being accommodated in shared wards of up to four mothers and their infants (Bloomer et al. 2016). Being located in a shared ward excludes a family member from staying to help the new mother after visiting hours.

Health Equity

Breastfeeding is a gender-specific issue. When in Australia following the publication of her book “Counting for Nothing” I heard Maralyn Waring an influential New Zealand economist and journalist say, that by not including unpaid women’s work such as child raising or breastfeeding within calculations of Gross Domestic Product, women’s labour was not valued. She described how breastfeeding therefore has to compete unfairly with the dairy and artificial baby milk companies. By not including the ‘production’ and ‘delivery’ of breastmilk, in national account-keeping, the 18 hours per week of work done by women to nurture and nourish their infant through breastfeeding results in a lack of budgetary allocation and resourcing (Smith & Forrester 2013; Waring 1999).

Economist Julie Smith argues that gender economic inequities are entrenched by worldwide government fiscal policies which provide incentives for families to use formula rather than breastfeed optimally (Smith 2015). The economic system promotes breast milk substitute subsidies and trade negotiators side-line human breast milk for cow’s-milk-based baby milk products (Smith 2004; Smith & Forrester 2013; Smith, Thompson & Ellwood 2002). If artificial baby food manufacturers were taxed or penalised for the costs incurred by the health system by not breastfeeding, similar to the tobacco industry, perhaps there would be more resources to promote breastfeeding. These arguments are supported by evidence from at least one study of 33 breastfeeding women in the North of England, who were given vouchers to incentivise breastfeeding. These women said they felt valued. The women appreciated

the extra financial support/reward provided in this study, with some participants saying the vouchers gave them the extra resolve and confidence to continue breastfeeding (Johnson et al. 2018).

Research demonstrates lack of support is the most common reason given by women for weaning (Department of Health and Aging 2019; Sheehan, Schmied & Barclay 2009; Smith et al. 2019). Without an understanding of what is an adequate postnatal environment to provide immediate support to newly birthed women, addressing the issues is problematic.

Internationally and within Australia, women have rated their postnatal hospital stay poorly, and there is copious literature calling for further research into the postnatal hospital environment (Beake, McCourt & Bick 2005; Beake et al. 2010; Rudman & Waldenström 2007; Vogel & Mitchell 1998; Waldenström, Rudman & Hildingsson 2006; Wray 2011, 2012). Failure to provide space for family to stay with the new mother prevents family support and family access to breastfeeding or infant care education which may ultimately impact breastfeeding outcomes.

Over the last decade, breastfeeding rates within Australia have declined, despite the increased uptake of the BFHI (Australian College of Midwives 2018). In NSW, where this study took place, only eleven public hospitals of the approximately 80 public and private maternity facilities are Baby Friendly Health accredited (NSW Ministry of Health 2019). There are few financial incentives or rewards for the extra effort required for women to breastfeed. Gender bias from decades of discrimination against women has resulted in the most vulnerable women and infants being neglected. Hence in undertaking this study, I hope to add to the evidence base to improve breastfeeding outcomes by gaining a greater understanding of what women and their families think is important in terms of the physical design of the postnatal hospital space when learning to breastfeed. If BFHI is to achieve the aims of improving breastfeeding, this study may contribute valuable information. Therefore, the purpose of this study is to examine the impact of hospital postnatal ward environments on the breastfeeding experience of mothers and babies.

Overview of the thesis

In chapter two of the thesis, I present a scoping review of the literature that aims to explore the breastfeeding experiences of mothers and babies in single versus shared hospital rooms, in the decades following the introduction of the BFHI.

In chapter three a detailed presentation of the ethnographic study design and methods used is presented along with a description of the hospital setting in which this research project was undertaken.

Chapter four presents the first set of findings from the study. The main theme of “Being on Guard” has three subthemes. These are: “You just feel the noise”, “Behind the curtains” and “Babies at the desk” which weave a narrative of the women learning to breastfeed while living within shared rooms during their postnatal hospital stay.

Chapter five presents the findings from the exploration of women’s experiences of breastfeeding when having their postnatal stay in a single room. The main theme “Building a Nest” has three subthemes. These are: “Space for a supporter to stay, “Feeling protected and private” and “Furnishings to support breastfeeding”. “Building a Nest” with the three subthemes is a narrative from the differing families of how the safe space created within single rooms promotes breastfeeding.

In chapter six a discussion and conclusion occurs, summarizing the evidence. The postnatal environment has lacked resourcing and an evidence base and the findings from this study demonstrate how the changing nature of birth has not kept pace with hospital design, the postnatal stay and breastfeeding. While breastfeeding rates have gone down, the increased complexity of women due to an increased numbers of surgical births has debilitated women’s ability to care for themselves and their infants. The hospital environment and breastfeeding requires urgent attention revision to include family day and night.

Chapter 2: Literature Review

This chapter presents a scoping review of the literature, relating the postnatal ward environment to women's breastfeeding experiences when rooming-in with their baby. Scoping reviews are conducted to identify and examine characteristics or factors related to a particular concept and can be used to synthesize research evidence and to map existing literature in a given field (Peters et al. 2015). The primary aim of this scoping review of the literature, is to develop an understanding of the "conceptual boundaries" of the topic and to identify knowledge gaps (Peters et al. 2015).

Choosing a Scoping Review

When commencing the literature search using the search terms listed below, I realised there was scant literature on my topic. Few researchers had considered the experiences of women breastfeeding and rooming-in with a baby twenty-four hours a day; or how the design of the postnatal hospital ward accommodation was linked with women's experiences following birth. In a scoping review (unlike systematic reviews), researchers do not evaluate the quality of the studies but aim to provide an overview or map of the existing literature (Munn et al. 2018). O'Malley and Croucher suggest that scoping reviews can be seen as a 'preliminary attempt to provide an overview of existing literature that identifies areas where more research might be required'(O'Malley & Croucher 2005, p. 572).

There was a copious body of literature that revealed mothers have been dissatisfied with their postnatal hospital stay for decades, however information on the environmental impacts of breastfeeding when rooming-in was sparse (Baker et al. 2005; Beake, McCourt & Bick 2005; Beake et al. 2010; Forster et al. 2008; McLachlan et al. 2008; Rayner et al. 2008; Rudman & Waldenström 2007; Vogel & Mitchell 1998; Waldenström, Rudman & Hildingsson 2006). When commencing this literature review three studies were identified, specific to the maternity ward environment and breastfeeding (Hakala et al. 2018; Kurth et al. 2010; Lai et al. 2015).

The review of the literature presented in this chapter explores thirty-nine articles located during the literature search. Due to the paucity of literature from maternity

settings, studies from the acute hospital setting from Australia and overseas were included where information was relevant to the postnatal hospital stay. No studies that compared the differences in breastfeeding outcomes of postnatal women in single or shared rooms prior to or post the introduction of BFHI were located. No studies were located describing the impact of closing well-baby nurseries preceding or following the implementation of BFHI.

Searching the Literature

This literature search was guided by the use of the PICO (acronym for Population, Intervention, Comparison, Outcome) framework that helped to identify the Population of interest (postnatal hospitalised women, in BFHI-accredited hospitals), the Intervention and Comparison (single versus shared postnatal/maternity ward accommodation) and Outcomes (rooming-in, maternal satisfaction, support by family, safety concerns, artificial infant milk feeding, breastfeeding, and lactation) (Brockmeier et al. 2019). Databases using the search terms; single room, shared ward/room, postnatal/maternity, lactation, breastfeeding, rooming-in, parent satisfaction were searched in CINAHL, PubMed, Google Scholar, the Cochrane Library, and Scopus/Elsevier. In addition, NSW Health Department and the Commonwealth Department of Health and Aging websites were also searched for relevant policy and guideline documents.

As described in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart (Moher et al. 2009) (Figure 2.1), a search of the databases from 2005 until 2020, identified 859 records. Screening and checking of articles occurred and some cited references from older articles which included relevant material were also retrieved. Following the screening, thirty-nine records were selected, initially for review. In addition, three relevant NSW Health and three Australian Commonwealth Government documents were obtained from relevant websites and included in the scoping review. In 2021 two recent studies were added.

A data extraction table (Appendix D), to describe the key elements of each paper was developed, and included the author(s), date of publication, country in which the research was conducted; the aim, study design and methods of data collection; the number and type of participants; data analysis method and findings. As Appendix D indicates, the included studies arose from twelve countries (Canada, U.S.A, Australia, New Zealand, U.K, Netherlands, Ireland, Switzerland, Norway, Finland, Sweden, and Taiwan). The study designs were varied and included pre-post studies of different postnatal environments, cross sectional and cohort studies, ethnographic and phenomenological studies and included data collection methods such as observations, surveys, focus groups and interviews. Six of the included papers were structured or narrative reviews of the literature. The most common finding was that women and their families were dissatisfied with their postnatal stay and that the environment in which they were accommodated influenced whether or not they could have a family member to stay during the day and/or overnight and thus receive support, in addition to that provided by the postnatal midwifery staff. This was particularly problematic for women following caesarean section births. The studies are reviewed below.

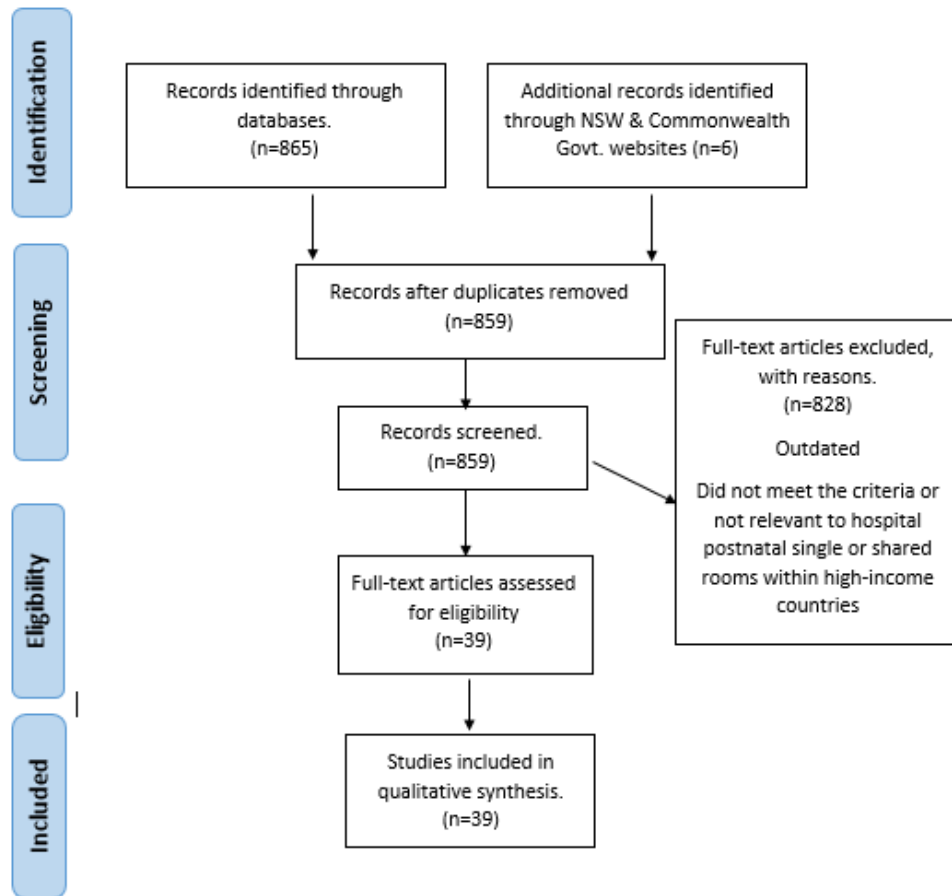


Figure 2. 1: PRISMA Flow diagram for included studies

Literature overview

As revealed in the influential ethnographic studies of Wray (2011) and Dykes (2005b; 2006), postnatal care is located at the lowest position on the so-called 'childbirth hierarchy' and receives the least attention and resourcing (Dykes 2005b; House of Representatives Standing Committee of Health and Ageing 2007; House of Representatives Standing Committee on Health and Aging 2009; McInnes & Chambers 2008; Wray 2011). A wide range of research has attempted to understand the postnatal experience in the hospital setting using a range of study designs. While some authors trial interventions (Schmied et al. 2008; Schmied et al. 2009), others conduct surveys (Bureau of Health Information 2019; Zadoroznyj et al. 2015), focus groups (Forster 2006), in-depth interviews (Baker et al. 2005; Beake, McCourt & Bick 2005; Beake et al. 2010; Kurth et al. 2010; Maben et al. 2015d), or ethnographies (Dykes 2005a; Grassley, Clark & Schleis 2015; Wray 2011, 2012). All have concluded that women are dissatisfied with postnatal hospital care, but few have considered the impact of the environment on a mother when rooming-in 24 hours a day with a baby, while learning to breastfeed.

There is a dearth of literature comparing the breastfeeding experiences of postnatal mothers in single or shared wards in hospital, with or without access to nursery support. Four studies considering the impact on the mother when rooming-in 24 hours a day with an infant were located (Hakala et al. 2018; Kurth et al. 2011; Kurth et al. 2010; Lai et al. 2015). In Switzerland, Kurth (2010; 2011), who was studying the impact of crying babies on tired mothers, called for more research on the effect of the environment and breastfeeding. Lai (2015) in Taiwan called for greater flexibility when implementing rooming-in with first-time mothers and women who had experienced an operative birth (Lai et al. 2015). One study in Finland researched how staff knowledge and confidence were linked to the differing rooming-in practices or nursery care usage and breastfeeding outcomes (Hakala et al. 2018)

There are six overarching government reports within this scoping review of the literature which included recommendations and mandates in relation to postnatal ward accommodation and support for postnatal women, their babies and families. Each government document is reviewed here as setting the policy scene in relation to the postnatal experience of breastfeeding women.

Table 2. 1: Australian Government Reports related to breastfeeding

1. The Best Start: Report on the Inquiry into the Health Benefits of Breastfeeding (House of Representatives Standing Committee of Health and Ageing 2007)
2. Maternity Services Review (House of Representatives Standing Committee on Health and Aging 2009)
3. "NSW Breastfeeding Policy" (NSW Ministry of Health 2018)
4. The Australasian Health Facility Guidelines Part B - Health Facility Briefing and Planning HPU 510 Maternity Unit (Australasian Health Infrastructure Alliance 2017)
5. The Australian National Breastfeeding Strategy: 2019 and Beyond (Department of Health and Aging 2019)
6. Patient Perspectives Experiences of maternity care in NSW 2019 (NSW Ministry of Health 2019)

Within Australia, in 2007 Hon. Alex Somlyay led a Commonwealth Government Parliamentary Inquiry into breastfeeding and recognised:

"With most babies being born in hospital, there is a clear opportunity for hospital personnel to promote the initiation of breastfeeding. The first days and weeks of a new baby's life are extremely important in the establishment of breastfeeding. Although breastfeeding is a natural process, and both mother and baby have instincts that support breastfeeding, there are many skills and adaptations that mothers and babies need to achieve in their early days together. It is known that many maternity hospital routines, including separation of mother and baby, using

complementary feeds, inconsistent advice, and medical interventions during birth can lead to poor breastfeeding outcomes.” (House of Representatives standing committee on Health and Aging, 2007, p 95).

Thirteen years on, only two of the twenty-two recommendations have been implemented from the report of the breastfeeding inquiry, *“The Best Start: Report on the Inquiry into the Health Benefits of Breastfeeding”* (House of Representatives Standing Committee on Health and Aging 2007; House of Representatives Standing Committee on Health and Aging 2008). The Commonwealth Government does not provide national leadership to protect, promote and support breastfeeding by collecting important breastfeeding data, has not implemented the WHO Code for marketing breastmilk substitutes and has not supported the BFHI, as was recommended (House of Representatives Standing Committee on Health and Aging 2008).

Soon after publication of *“The Best Start: Report on the Inquiry into the Health Benefits of Breastfeeding”*, (House of Representatives Standing Committee on Health and Aging 2009) the then Chief Nursing and Midwifery Officer, Rosemary Bryant, reported in the *“Maternity Services Review”* on the declining rate of breastfeeding and the myriad of factors affecting breastfeeding. Bryant recognised the relationship between socio-economic status and breastfeeding and reported that there was little evidence to guide early postnatal care (House of Representatives Standing Committee on Health and Aging 2009, p.35).

The Australasian Health Facility Guidelines, Part B, (Australasian Health Infrastructure Alliance 2017) lists the advantages and disadvantages of single and shared room inpatient accommodation (AHIA 2017, pp. 16-17), and determine the way new hospitals are to be built or renovated. Central to the maternity unit design is recognition of the concept of woman-centred care:

“[the] National Maternity Services Plan has as one of its key principles the idea that maternity care should place the ‘woman at the centre of her own care’ and this care is coordinated according to her needs ‘including her cultural, emotional, psychological and clinical needs, close to where she lives’

(AHIA 2017 Part B, p6).

Some of the principles that inform the guidelines, include that models of maternity care support “rooming-in” with single rooms to allow a partner or family member (culturally appropriate), to remain overnight. Under a section on ‘Environmental Considerations’ the document recognises that single rooms will help reduce the impact on other mothers of crying babies which may cause distress if sharing rooms.

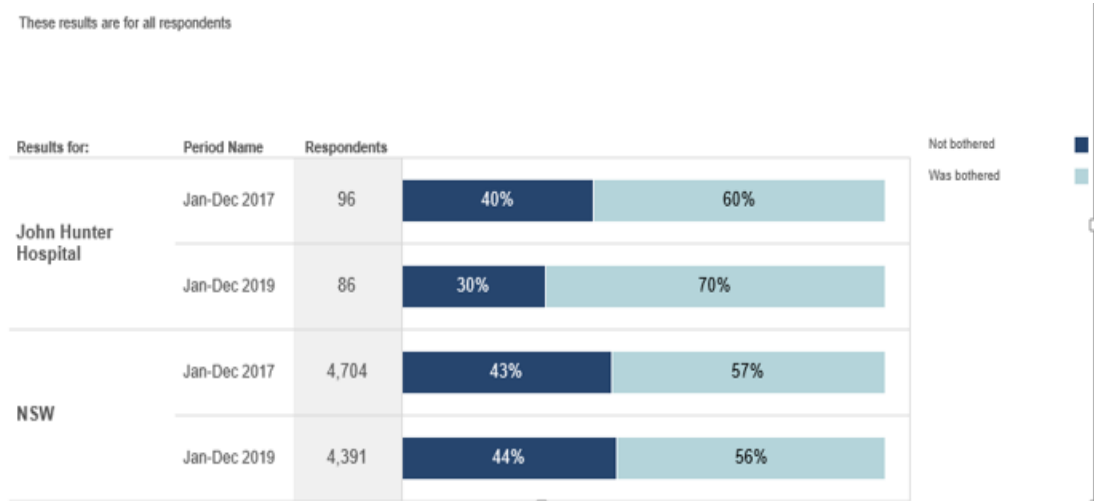
The “Australian National Breastfeeding Strategy: 2019 and Beyond” (Department of Health and Aging 2019) also recognises the importance of family. In particular it recognises that a supportive partner empowers mothers who want to breastfeed and recognises breastfeeding as a joint parental effort. The Strategy’s aims are to support all mothers, fathers/partners and infants in Australia to breastfeed (Department of Health and Aging 2019).

The “Australian National Breastfeeding Strategy: 2019 and Beyond” (Department of Health and Aging 2019) recognises the many benefits of breastfeeding to lifelong health (Department of Health and Aging 2019). The evidence into the importance of breastfeeding in reducing the numbers of infants suffering from necrotising enterocolitis, diarrhoeal and respiratory illnesses, middle ear infections, type 1 diabetes and childhood leukaemia is accepted, as is enhanced cognitive development in the infant (Department of Health and Aging 2019). The Strategy also recognises the benefits to the mother following birth by promoting a faster birth recovery, a reduction in breast and ovarian cancers in later life, reduced birth spacing and improved mental health (Department of Health and Aging 2019).

There are two NSW government documents relevant to this literature review. The first discussed is the “NSW Breastfeeding Policy” (NSW Health 2018). This policy is mandatory and requires local health districts (LHDs) throughout NSW to implement BFHI in all NSW public hospitals. Therefore, at the highest level of the state government of at least one Australian state, the BFHI and the Ten Steps to Successful Breastfeeding (World Health Organization & UNICEF 2018) are supported and endorsed (NSW Health 2018).

In NSW in 2019, a state-wide postal survey of women three months after the birth of their babies, was conducted to evaluate their public hospital stay. Ninety-eight aspects of their experiences were evaluated (NSW Ministry of Health 2019). A total of 4446 women responded to the survey, revealing that women had more positive views about their antenatal and birth experiences than about their postnatal care. No questions were asked about where the women were housed within the hospital postnatal accommodation. This is important, as some women birth at home or go home from the birthing suite within a few hours after birth and are cared for at home, while many others remain within the postnatal ward in either single or shared accommodation.

Table 2. 2: Respondents bothered by noise, lack of privacy, security or lighting during stay in hospital. Patient Perspectives: Experiences of maternity care in NSW 2019 (NSW Government 2020)



As demonstrated in Table 2.2, a question about the impact of some environmental factors in the postnatal ward was included within the survey which included noise, light, and safety. No questions were asked about the ability of the women to rest. Of interest for my research was the response from women who birthed at John Hunter Hospital which is the setting for my study. Although the numbers are small (see Table 2.2), of the John Hunter Hospital respondents to the survey in 2019, 70% stated they were dissatisfied with their postnatal hospital experience as they were bothered by noise, lack of privacy or lighting compared to the NSW average of 56%. As 25% of women within the research hospital remain in single rooms and some women go

home immediately following birth, this figure demonstrates a majority of women are bothered by the postnatal ward environment (Bureau of Health Information 2017).

These government-initiated reports at national and state levels, reveal that different divisions of government are responsible for monitoring and reporting on different aspects of policy. Since the NSW breastfeeding policy mandates BFHI implementation, it is surprising that monitoring of breastfeeding success is not done more fully in any jurisdiction. Gaining insights into the factors that increase breastfeeding success is largely the responsibility of researchers rather than being an integral part of government policy. This reflects the position of breastfeeding and lack of understanding of its importance at the highest policy level. Without addressing the rapid decline in breastfeeding outcomes following birth in hospital and during the early postpartum weeks, the Sustainable Development Goal target of 50% of infants being exclusively breastfed until around six months of age will be difficult to reach.

Accommodation in the Acute General Hospital Setting

Eight qualitative studies specific to single and shared wards within the acute hospital setting were relevant to the aims of this literature review. Two studies were from Victoria, Australia (Bloomer et al. 2016; O'Connor et al. 2012) and six international studies were found including three from the United Kingdom (Maben et al. 2015b, 2015d; Phiri 2004), one from Canada (Chaudhury 2005) and two from The Netherlands (van de Glind, de Roode & Goossensen 2007a; van de Glind, van Dulmen & Goossensen 2008).

Within the research literature there were advantages and disadvantage found by both staff and clients (clients maybe referred to as patients or women) in having all single room accommodation in hospitals, with more patients expressing a preference for single rooms than shared rooms (Maben et al. 2015c). Women in maternity settings within these studies expressed a clear preference for single rooms. Single rooms were found to be associated with higher costs, but the difference was marginal over time (Maben et al. 2015c).

The first study of relevance from the acute hospital setting was a sequential exploratory design study measuring single room usage patterns within one large general Victorian public hospital (Bloomer et al. 2016). Data were collected over a 2-week period in 2014. The study authors found the staff allocating rooms were left with little flexibility since there were inadequate numbers of single rooms available. Seriously ill patients, or those with infections or private health insurance, took precedence. Total bed occupancy did not fall below 99.4% throughout the period of data collection. The study highlighted the complexity of nurses decision-making about patient allocation to single rooms, which the authors stated lacked evidence-based guidelines and required urgent attention (Bloomer et al. 2016). The second Australian study (O'Connor et al. 2012) explored the inpatient acute health care environment and its influence over outcomes of care. This review by O'Connor et al., using search terms *environment* and *design*, revealed 74 literature articles of which sixteen were related to areas of health care which included dementia and cancer patients needing rehabilitation (O'Connor et al. 2012). Using a more focused search, and using search terms relating to different hospital areas such as *emergency*, *critical care*, *maternity* and *midwifery*, the authors found that there were common themes, despite the diversity of patient care settings. This finding highlighted that there was a greater need for input from the users of the facilities to incorporate dignified and expedient delivery of care (O'Connor et al. 2012). Five themes were included within the Australian study that addressed the design of physical space, family needs, privacy considerations, the impact of technology, and patient safety. The authors stated the environment had not kept up with the changing nature of the contemporary healthcare requirements within

the last thirty years (O'Connor et al. 2012). Within the maternity hospital section of the study, the importance of design to include family to enhance “normality” for labouring woman and during birth was described but postnatal hospital care was not included in this paper (O'Connor et al. 2012).

Within the United Kingdom an evaluation of patient and staff experiences of all single room hospital accommodation was undertaken (Maben et al. 2015b). Four nested case study wards (postnatal, acute admissions unit, general surgery and older people) within a new hospital with all single rooms were compared with a quasi-experimental study of two control hospitals which formed the comparison group (Maben et al. 2015b). An analysis of capital and operational costs associated with single rooms took place. Pre and post hospital move, in-depth interviews of 32 recent or current inpatients were undertaken as well as 24 interviews with staff (Maben et al. 2015b). Although advantages and disadvantages were found with single room care, two-thirds of patients expressed a clear preference for single rooms with postnatal women largely preferring single rooms saying the benefits of comfort and control outweighed any disadvantages. Several studies have indicated that for some sick and elderly patients, single rooms had negative impacts, including social isolation, patient deterioration, increased adverse events and death (Maben 2009; Maben et al. 2016a; Maben et al. 2015a; O'Connor et al. 2012). Within a staff survey, 50 of 54 staff perceived the rest and sleep of women was improved in single rooms however some first time mothers wanted more opportunities to go out of their rooms and meet other women, emphasising the importance of communal spaces (Maben et al. 2015).

In the North of England, when studying single room environments at the Leeds Nuffield hospital, the author (Phiri 2004) found single rooms to be beneficial to patients because single rooms recognised the human rights of an individual and fulfilled many of the dimensions of care which patients required such as privacy and confidentiality. Single rooms were found to enhance the patient's ability to be in control and be able to block out noise, adjust room temperature, maintain privacy, feel safe, and include family to promote patient well-being (Phiri 2004).

An analysis of the literature into the advantages and disadvantages of single-versus multiple occupancy rooms in the acute care environments by Canadian authors revealed that single rooms reduced the risk of hospital-acquired infections. Additionally, single rooms allowed for greater flexibility in operation and management and had positive therapeutic impacts on patients. Positive impacts for patients included improved privacy, lowered stress levels and, when family were accommodated with patients, reduced numbers of falls (Chaudhury 2005).

In the Netherlands, when researching the benefits of single rooms, the authors included 25 studies within a literature review (van de Glind, de Roode & Goossensen 2007b). Privacy and dignity, patient satisfaction with care, noise, quality of sleep, hospital infection rates, recovery rates which included complications and length of stay, and patient safety which included the number of falls and medication errors, were all considered. The authors concluded there were an inadequate number of studies available to thoroughly evaluate the use of single rooms (van de Glind, de Roode & Goossensen 2007).

All studies included in the literature reviews identified that patients perceived curtains as inadequate for auditory and visual privacy in areas such as emergency departments (Chaudhury 2005; Phiri 2004; van de Glind, de Roode & Goossensen 2007). In an observational study from the Netherlands, researchers found privacy and confidentiality was improved in single rooms within a urology ward (van de Glind, van Dulmen & Goossensen 2008). It was observed that physicians spent longer and showed more empathy with patients in single rooms (van de Glind, van Dulmen & Goossensen 2008). This study has relevance to women in postnatal wards due to the sensitive nature of maternity care. Like many newly postnatal women, urology patients may be embarrassed when discussing their symptoms or condition and curtains were found to be inadequate to maintain privacy (van de Glind, van Dulmen & Goossensen 2008).

Staff preferred a mixture of single and shared wards, as teamwork, visibility and safety were enhanced in shared wards (Maben 2009; Maben et al. 2016a; Maben et al. 2015a). Maben stated that little empirical work on single rooms had been undertaken

in the UK despite potential advantages being attributed to single-room accommodation (Maben et al. 2015a, 2015d).

Without exception, the papers concluded that the benefits of single rooms in the acute hospital setting outweighed the disadvantages and emphasised the relevance of inclusion of family within the hospital stay for optimal well-being of patients (Chaudhury 2005; Maben 2009; Maben et al. 2016b; Maben et al. 2015a, 2015d; O'Connor et al. 2012; Phiri 2004; van de Glind, de Roode & Goossensen 2007a; van de Glind, van Dulmen & Goossensen 2008). All studies recognised that space and design have implications for family-centered care and in a consensus statement for end of life care by the American College of Critical Care Medicine they stated that patients are embedded in a greater social structure and web of relationships and acknowledge the importance of family centred care. (Truog et al. 2008). Where maternity accommodation and women were part of the studies, the authors found women preferred single rooms.

Accommodation in the Maternity Hospital Setting

Twenty-four papers were included in this section of the literature review since they focused on the impact of different kinds of accommodation in the maternity hospital setting. Of the eight Australian papers, including four from Victoria (Forster et al. 2008; McLachlan et al. 2008; Rayner et al. 2008; Rayner et al. 2010), one from NSW (Passant 2012) and three from Queensland (Kelly 2012; McKinnon, Prosser & Miller 2014; Zadoroznyj et al. 2015), all identified that women were dissatisfied with their postnatal stays and breastfeeding experiences whilst in hospital.

In a state-wide review of 14 private metropolitan and regional hospitals in Victoria, Rayner and colleagues conducted key informant interviews (n=11) with maternity unit managers, midwives and obstetricians (Rayner et al. 2010). Thirteen of the hospitals reported having a designated postnatal unit. All provided single room accommodation, (6 hospitals had only single rooms and others had no less than 50% single rooms). Key informant interviews revealed that accommodation was available for partners to stay overnight, and women commonly requested and preferred single rooms, with an

expectation that private health insurance entitled them to a private room. Most women (84%) stayed four days following the birth of their infants, with women in metropolitan areas staying longer than those from regional hospitals (86% compared to 68%) (Rayner et al. 2010). A small number of key informants expressed a desire for more flexibility in the length of stay for women, believing that the longer length of stay allowed women to rest and recover. The majority of hospitals reviewed (11/14) had special care nurseries, and six also reported well-baby nurseries, with both types of nurseries staffed separately from the postnatal units (Rayner et al. 2010). Rooming in was regularly practiced by eight of the 14 hospitals of which four (29%) had a hospital policy that babies should room-in. Four hospital respondents considered that as the women were private patients, requests for their baby to be cared for in the nursery were reasonable. One respondent stated that rooming-in was not always appropriate when the women were tired and said there was a need to account for the individual needs of women (Rayner et al. 2010). Two hospitals within this study reported that they were accredited as Baby Friendly Hospitals and the median proportion of women exclusively breastfeeding on discharge was reported to be 93% (range 82% to 98%) (Rayner et al. 2010).

In Queensland, Kelly (2012) examined the breastfeeding outcomes of women at discharge, three and six months postpartum, prior to the BFHI accreditation of a tertiary maternity hospital in Brisbane (Kelly 2012). A prospective cohort design was used to explore the initiation and duration of breastfeeding of 475 women and infants. Results showed exclusive breastfeeding rates were 71.9% at discharge from hospital, 57.6% at three months postpartum and 4.6% at six months postpartum. A noteworthy finding was that the combined, exclusive and predominant breastfeeding rate at discharge of 73.0% only decreased by 4.0%, to 69.0%, at three months. This finding indicates that the influences of the early postpartum period, both before women leave hospital, and directly afterwards, has a significant impact on exclusive breastfeeding outcomes and long-term breastfeeding rates. Kelly found that mode of birth such as caesarean section had a significant adverse outcome on exclusivity of breastfeeding, as did using formula in hospital (Kelly 2012). Skin-to-skin contact was found to have a

positive effect on breastfeeding. Skin-to-skin contact is when the mother or father has the naked baby placed on the parent's naked chest, to promote bonding and help settle the infant (Moore et al. 2016). Kelly also found that being privately insured (therefore more likely to have a single room with longer postnatal stays) was associated with enhanced breastfeeding exclusivity rates (Kelly 2012).

A state-wide review of postnatal care in public hospitals in which 33 midwives were interviewed indicated that midwives considered an environment conducive to rest and recovery and included only one or two women rooming-in with their babies, contributed to the overall satisfaction of women within the postnatal hospital stay (Rayner et al. 2008). One participant stated:

"I would think number one would be rest, sleep, and you know, they talk about baby-friendly hospitals, but some of the mums screamed at us, 'Well, when are we going to get mother-friendly?' Far too many visitors, really long drawn-out visiting hours, but you'll be a brave person if you challenge that, from the community point of view" (Rayner et al. 2008, p. 315).

Another study in Victoria surveyed 71 public hospitals, interviewing managers and midwives about the organisation and structure of hospital postnatal care. This found the fixed length of hospital stay inhibited rather than supported postnatal care, and suggested a need for a focus on individualised care of women rather than the organisational needs of hospitals (McLachlan et al. 2008). This finding was reflected in the study by Passant (2012) in NSW which explored the key elements to include in the development of a new model of postnatal care within the tertiary maternity hospital setting. Passant recognised the need for more single rooms and places where it was comfortable for women to rest and relax (Passant 2012).

Other studies have also found that meeting the individual needs of women is important. While interviewing four women and running eight focus groups of mothers in rural and metropolitan Victoria, Forster and colleagues found that the needs of first-time mothers were different from those of women who had previous children (Forster et al. 2008). Similar to the study by Rayner (2010), Forster et al also found that women

wanted to have breastfeeding skills taught in hospital and to stay in hospital longer where they felt safe with the support of professionals to teach mothering and breastfeeding (Rayner et al. 2010; Forster et al. 2008).

In general, the literature demonstrates that women are not satisfied with their hospital postnatal ward environment and care. In two Queensland studies, one a retrospective, cohort study of associations between birthing in the public or privately insured sector, and the other a survey about post-birth care, neither group of women were satisfied. While the women within the public sector found the hospital environment inadequate, women within the private sector were dissatisfied with postnatal follow-up after discharge home (Zadoroznyj et al. 2015; McKinnon et al. 2014).

International Studies of Maternity Hospitals

Twenty-two quantitative and qualitative international studies were found that focused on postnatal care relevant to single and shared accommodation. Two studies by the same authors using surveys of midwives and women housed in single rooms were conducted in Canada in 2000 and 2001 (Janssen et al, 2000; 2001). A pilot study of women who birthed in a seven-bed single room maternity unit and remained in the same single room after birth and were provided with a family-centred care experience, found greater satisfaction amongst midwives. The midwives were able to provide one on one care, individualised to the family's needs compared to midwives from the traditional hospital setting (Janssen et al. 2000). The second study compared 205 low risk women having maternity care in single rooms with 221 similar women who birthed within a three-month period in the traditional hospital setting of the research site (Janssen et al. 2001). The women who were provided with single room maternity care had greater satisfaction with their hospital stay (Janssen et al. 2001). The study found families were more satisfied with the physical environment, lack of hospital transfers during the hospital stay and midwifery care by a designated midwife (Janssen et al. 2001).

All other studies from the maternity postnatal care setting were unequivocal that change to improve outcomes for postnatal women was necessary. Two European studies describing single rooms and rooming-in were found. In a Norwegian study, 160 women answered a

questionnaire with results showing that the strongest factor associated with lack of rest and sleep was not having a single room (Eberhard-Gran et al. 2000). Studies of the noise in the shared postnatal ward environment impacting women's ability to rest have been commented upon for decades (Filshie et al. 1981; Vogel & Mitchell, 1998). International studies have reported that women are less disturbed by their infant than by conditions within the hospital environment such as light and noise, visitors, hospital admissions and discharges, impacting their ability to rest (Waldenstrom & Swenson, 1991). A Swiss study of maternal fatigue recommended more research into the environmental impacts of shared rooms when mothers were rooming-in with their babies in single and double (2-bed) rooms (Kurth et al. 2010). This qualitative study found that without support, women had little time for themselves and reported that if the baby was "fussy", which was described as the infant requiring constant attention and feeding, women got little rest (Kurth et al. 2011; Kurth et al. 2010). The author stated:

"[the] restoration of strength was hampered by a lack of sleep, which was mostly due to infant's needs, but sometimes also because the mother's well-being required night-time assessment by care providers. In addition, the actual environment created challenges to obtain rest, especially when women shared rooms" (Kurth et al. 2010, p. 4).

In an ethnographic study of night duty nurses in the United States of America (USA), the second 24 hours following birth, particularly at night, was the period identified as being when the infant was fussy and constantly breastfeeding, while coinciding with the period of time mothers were fatigued and in need of help (Grassley, Clark & Schleis 2015). The only description of the environment in this study was the inclusion of a well-baby nursery. The configuration of the rooms as single or shared was not described.

Similarly, a Finnish cross-sectional study of eight hospitals, of which two were BFHI-accredited, and where "rooming-in" was administered on a more flexible basis than in Australia, found that women who had single-family rooms and practised 100% rooming-in were more satisfied with their postnatal stay than the women housed in shared rooms (Hakala et al. 2018). The women were housed in wards with different numbers of beds and included family care rooms, two-bed rooms and wards with four

or six beds (Hakala et al. 2018). The experience and breastfeeding education of the staff who cared for the women and infants was found to be relevant to the amount of time women roomed-in with their infants, and the amount of formula usage (Hakala et al. 2018). Some babies were cared for in a nursery by nursing staff, with staff and women citing pain or tiredness as a reason for nursery care away from the mother (Hakala et al. 2018). The environment for this study was very different to that found in Australian maternity units where there is most often no nursery and there are no family care rooms or shared rooms with up to six beds.

Confidentiality and privacy were found to be an issue in shared rooms on postnatal wards at St. Mary's hospital in Manchester (Bhaskar, Koumoussidis & Vause 2013). A survey of 60 women found ward rounds were thought to be a time for breach of confidentiality, especially in 4-bed bays. Six out of 59 women had overheard information about neighbouring women during the rounds (Bhaskar, Koumoussidis & Vause 2013). Women stated that curtains were inadequate to separate women and did not adequately protect them from the noise of the ward, crying babies, and other women and their visitors, or protect privacy and confidentiality. The study reported that shared postnatal accommodation can lead to embarrassment while breastfeeding, poor history-taking due to women not wanting to reveal private information where others can overhear, and stress from other women and their visitors (Bhaskar, Koumoussidis & Vause 2013). The ease of hearing other women's personal health information during ward rounds indicated by this study has similarities to Australian settings. Such breaches of confidentiality could lead to legal implications, should women wish to pursue this.

In the UK, Beake has led research into postnatal care for several decades. In an early 2005 study with colleagues, it was identified that:

"Women expected their period in hospital to be a time of rest with support in breastfeeding, basic baby care and emotional support. However, in practice the environment was not conducive to rest and the support was difficult to obtain. Most wanted to leave hospital quickly to return home where they felt more in control and could relax" (Beake, McCourt & Bick 2005, pp. 1-15).

Subsequently, Beake identified that the design of the postnatal hospital environment was based on a medical culture and the care of people with acute illness (Beake et al. 2010). She identified that the medical culture contributed to a lack of support for breastfeeding (Beake et al. 2010). She was not alone in this conclusion - others have proposed that postnatal wards should be like sanctuaries. For example, Wray describes the postnatal environment as a place:

“...where women feel special and are able to celebrate their birth and be supported in their recovery process” (Wray 2012, p.22).

In her ethnographic study within two UK hospitals, Wray found women were mainly housed in shared wards and postnatal care was on the lowest rung of the birth hierarchy (Wray 2011, 2012). Women could apply to have a single room if one were available, at extra cost. Wray commented in her thesis (Wray 2015) that helping the shared ward quieten at night was achieved by midwives baby-sitting babies in the staff office to allow women to rest, however breastfeeding was not part of her study.

A more family-oriented approach has been suggested by some authors. Within Scandinavian research the issue of single rooms with inclusion of a more family-centred approach to improve breastfeeding and satisfaction with the postnatal stay was a common theme (Ellberg, Högberg & Lindh 2010; Valbø, Iversen & Kristoffersen 2011; Waldenström, Rudman & Hildingsson 2006). One Swedish study has stressed:

“a true family perspective should be applied in postnatal care and the new parents viewed as a family unit, not as medical cases only. Staff working in postnatal wards should be given the opportunity to involve fathers in postnatal care” (Hildingsson et al. 2009, p.289).

In Sweden, researchers found single rooms and inclusion of partners during the postnatal period to be a key finding among parents who were satisfied with their postnatal care (Ellberg, Högberg & Lindh 2010). Women who gave birth in smaller facilities were more satisfied with their postnatal stay because study findings suggested the staff had more time to spend with the women (ref). Another study showed there was a significant association with dissatisfaction with the postnatal period due to the

short hospital stays, which contributed to a lack of support and time to address the concerns of the mothers with hands on support for breastfeeding (Waldenström, Rudman & Hildingsson 2006). This study showed that only women whose partners could remain overnight in family-orientated wards were more satisfied with postnatal care, which can be interpreted simply as women appreciating more family support (Waldenström, Rudman & Hildingsson 2006). Researchers in Norway who conducted a cohort study of women giving birth and the staff caring for them within a seven month period found the mothers rated the importance of support with childcare during the night higher than the staff did. The authors concluded that data collection from users of the service (women) was mandatory if health services were to adapt to women's needs as time evolves (Valbø, Iversen & Kristoffersen 2011).

Postnatal rest and support for women are vital for the continuance of breastfeeding. Women will trade off breastfeeding for artificial milk if they are not provided with adequate rest and support, and first time mothers, women who have had operative births and women with infants within the neonatal nursery are at high risk of introducing artificial milk (Beake et al. 2017; Klingaman 2009). The type of women vulnerable to early weaning was demonstrated in a routine audit by staff when preparing for BFHI accreditation within an Irish hospital (Doyle, 2015). The authors examined the medical histories of 102 women who had birthed within a one month period and initiated breastfeeding (Doyle, 2015). Twenty-two had weaned before going home and when the records of those women who had weaned were examined, seven were first time mothers, four mothers had infants in the Special Care Nursery, and 50% of the women had weaned during the night (Doyle, 2015). Without knowing the type of accommodation and if family support was available during the night, the reasons for this are difficult to assess. Within the same group of women 55% of the mothers had spontaneous vaginal births, and 45% operative or instrumental births (Doyle 2015). This audit demonstrates some of the types of women who are vulnerable and in need of extra family or midwifery attention when learning to breastfeed, and why having a family friendly environment is necessary (Doyle 2015).

The call for improvements in care for postnatal women is decades old. A 1998 study from New Zealand concluded:

“Studies have not addressed the impact of shared rooms on mothers’ experiences. Women who feel uncomfortable learning to feed in the company of others, or who may be afraid of their infant disturbing others should be identified and given extra attention. Increased provision of single or double rooms should be considered in hospital design” (Vogel & Mitchell 1998 p. 9).

A recent study from Canada introduced a quiet time intervention during the day to minimise noise and disruptions on the postnatal wards. Noise and disruptions were seen as detrimental to women’s recovery and the authors argued for less disruptions and a quiet time to reduce stress and allow woman to rest (Adatia, Law & Haggerty 2014; Lawal 2020). They also stated it was the responsibility of managers to monitor noise levels on the ward for women’s wellbeing.

Similar results reporting upon environmental factors and women’s postnatal wellbeing have been found in New Zealand. A two phased, sequential explanatory mixed methods research approach was undertaken using online survey questionnaires and focus group discussions (Lawal 2020). The author studied two groups of postnatal women and midwives and examined their perceptions of the physical environmental factors that influenced women’s recovery experiences and wellbeing in a tertiary maternity hospital (Lawal 2020). Evidence was found to promote the importance of single rooms to enhance emotional and psychosocial support during the postnatal recovery period (Lawal 2020). Although this study was focused on the architectural aspects and not breastfeeding, the importance of a healing space to promote rest and recovery, and communal and outdoor spaces for the family were emphasised (Lawal 2020).

Since the introduction of BFHI there has not been adequate evaluation of the impact on breastfeeding of sharing wards with other mothers and babies while rooming-in with infants twenty-four hours a day. There is a gap in the literature examining the impact of the loss of the well-baby nursery and what type of hospital accommodation

best supports mothers when breastfeeding and rooming-in with their infants – from the women’s perspective.

Summary

Postnatal hospital care has been the least highly regarded section of the birth continuum for decades (Baker et al. 2005; Beake & Bick 2007; Beake et al. 2017; Beake, McCourt & Bick 2005; Beake et al. 2010; Forster et al. 2008; Morrow et al. 2011; Passant 2012; Rayner et al. 2008; Vogel 1998; Wray 2011). New mothers report that the shared postnatal wards of the hospital do not allow for inclusion of partners or support people overnight to help them or their baby (Hildingsson et al. 2009; Waldenström, Rudman & Hildingsson 2006).

Rest, recovery, and celebration of birth was difficult to achieve in shared hospital rooms while learning to care for a baby and breastfeed, resulting in poor satisfaction with the in-hospital postnatal stay (Baker et al. 2005; Dykes 2005a, 2006; Wray 2011). Short hospital stays focus maternity care on the needs of the institution and medicalised model and fails to consider the importance of postnatal care in delivering and optimising breastfeeding and mothering skills (Forster et al. 2008; McLachlan et al. 2008; Morrow et al. 2011; Rayner et al. 2008).

Women value the support of professionals and may choose to remain in hospital to learn mothering and breastfeeding skills (Forster et al. 2008). Parents want to be together with their new infants, and they measure the value of the postnatal experience according to the level of acceptance of the partner or support person’s involvement in the hospital experience (Hildingsson et al. 2009; Hildingsson 2007; Waldenström, Rudman & Hildingsson 2006; Wray 2011). There was no evidence to show that by closing the well-baby nursery when BFHI was introduced, that breastfeeding rates, or the postnatal stay experience have improved. If successful breastfeeding rates are an indicator, BFHI has not achieved its aims, and further research into what is the optimum environment for women to commence breastfeeding in, is urgently needed. The next chapter describes the design of an ethnographic study to explore the environment of the postnatal hospital setting for women initiating breastfeeding with their newly born baby.

Chapter 3: Study Design and Methods

This chapter presents the study design and methods for an ethnographic study to explore women's experiences when establishing breastfeeding while rooming-in with their babies in a public, tertiary referral BFHI-accredited hospital postnatal ward setting. The overarching aim was to study the effects of the environment on women learning to breastfeed. In designing this study, I had my own theories as to why breastfeeding rates were not meeting international benchmarks, but I wanted to hear from the mothers and their partners as the users of the service, and ultimately the taxpayers who contribute to funding the public hospital system.

As a novice researcher, I was in the hands of my supervisors who suggested I attend an education workshop on Qualitative Research. Subsequently through coursework, I decided to undertake an ethnographic study of the postnatal ward environment, which I considered was well suited to my research project. In the following section, I describe the field of ethnography and ethnographic methods of enquiry.

Methodology

Ethnography can help in understanding a particular social situation. By using immersion of the researcher into the postnatal ward setting, the ethnographic approach enabled a mirror to be placed on the environment being studied (Silverman 2015). This chapter begins with an overview of ethnographic methodology, followed by a detailed description of the study design, the methods of participant recruitment, data collection and analysis, and considers the ethical issues that were addressed.

Ethnography is used in the social sciences to allow the qualitative researcher to study an environment or culture in the real-world or natural setting. Ethnography attempts to make meaning of the lived experiences and naturally occurring behaviour of the participants. Qualitative or naturalistic research originates within the sociological science traditions, specifically used by anthropologists at the beginning of the

nineteenth century. This methodology has since moved to other disciplines, such as education, psychology, nursing, and midwifery (Silverman 2015; Van Mannen 2008).

Ethnographic research uses a “bottom-up” or inductive approach (emic), to discover and learn from the participants by using observations and interviews rather than deduction. Deduction is a “top-down” approach (etic), where researchers evaluate propositions or hypotheses against the evidence collected from the study (Ormston et al. 2014). As my study aim was to learn from the users of the postnatal ward how the ward environment impacted their breastfeeding experience, the emic perspective was ideal.

In taking an ethnographic approach there is an understanding that culture is socially constructed, and research takes an interpretive narrative on the interaction between the individuals within the social structure (Kincheloe & McLaren, 2011). As breastfeeding is a gender specific task historically controlled by powerful institutional and economic structures, ethnography is ideally suited to this research.

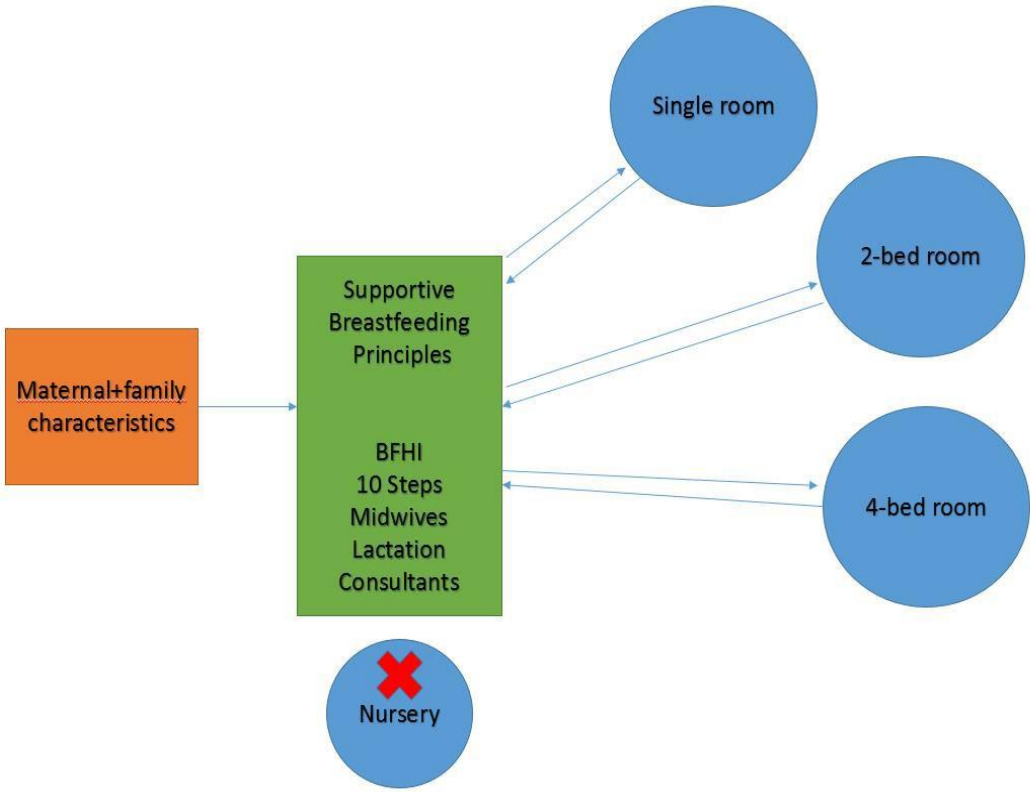
Ethnographers believe the mind, body and social experiences are interdependent and behaviour is not always conscious but is influenced by culture and structure common across groups (Bhaskar, 1989). By observing and asking women and their family members, about their breastfeeding experience in the postnatal setting, further understanding may be revealed about the social, institutional, and environmental structures and constructs which impact upon breastfeeding (Rees & Gatenby 2014).

The conceptual framework below illustrates the links between the evolving nature of hospital design and knowledge with the differing needs of newly birthed women learning to breastfeed.

Conceptual Framework

According to Miles and Huberman (1994), a conceptual framework “lays out the key factors, constructs, or variables, and presumes relationships among them (p. 18).” The conceptual framework for this study describes the key variables that support breastfeeding within the hospital environment. Figure 3.1 demonstrates breastfeeding

is linked to the diverse types of postnatal ward settings. The conceptual framework illustrates the links between the characteristics of mothers, the evidence-based principles of supporting breastfeeding and the differently structured environments in the postnatal ward. These include the maternal characteristic of: parity, type of birth, previous breastfeeding experience, marital status/family support, ethnicity, culture, physical and mental health. The evidence-based principles of supporting breastfeeding include skin-to-skin contact, mothers and infants “rooming-in” 24 hours a day, BFHI accredited facility, lactation consultant and midwife support and education. The differently structured environments include single or variously configured shared rooms with or without a nursery which house the mothers in hospital.



3. 1: Conceptual Framework

Study Design

This study used an ethnographic design approach. Data collection was through observation of women, babies and families in the setting of the postnatal ward environment, as well as through field notes and reflections on the observations, photographs and interviews. Each of these methods of data collection, are described in detail in the following section. The section begins with a detailed description of the setting for this research.

Study Setting

The setting for the study was a large regional tertiary referral hospital in NSW, Australia, which has a maternity unit where approximately 4000 women give birth annually. The hospital has been BFHI-accredited since 2007, which means the WHO/UNICEF Ten steps to Successful Breastfeeding (WHO & UNICEF, 2018) are used, and the staff work diligently to provide women with evidence-based breastfeeding support. The current maternity ward at the study site was built more than twenty years ago. The shared ward environment is based on the traditional acute medical/surgical hospital ward and was not designed to house mothers and babies to room-in day and night. When BFHI was introduced in 2007 the well-baby was closed and babies were required to room-in with their mothers.

The 32-bed ward is comprised of six 4-bed rooms (with shared bathrooms external to the rooms) and eight single rooms with en suite shower and toilet facilities. Five of the six 4-bed rooms accommodate postnatal women and their babies. One 4-bed room accommodates pregnant women in early labour or undergoing induction of labour with balloon catheter or cervical ripening. Figure 3.2 schematically describes the southern end of the ward where there are 3 shared rooms with 4 beds in each, and five single rooms with en suites. In the northern end of the ward there are three 4-bed rooms and three single rooms with en suites. Within the northern end of the ward there is a small kitchen available for staff and woman and an artificial milk preparation room. Separating the two ends and located in the middle of the northern and southern ends of the ward is a reception desk and staff working area, comprising several desks, offices

and equipment, and a common room (Appendix D, images 15, 16 and 17)

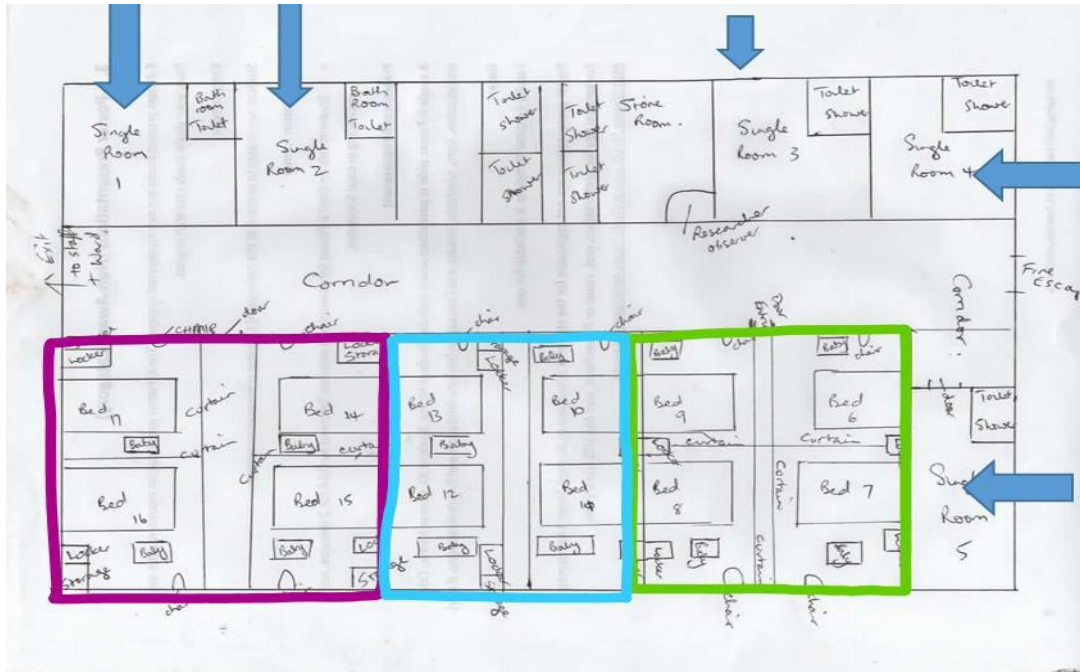


Figure 3. 2: A schematic outline of the Southern section of the postnatal ward. Three shared wards are indicated by the coloured blocks. Five single rooms and en suites are indicated by the blue arrows.

The common room is multi-purposed and can be used for education sessions and/or as a waiting room (appendix D, Images 15, 16 and 17). The common room houses an infant resuscitator, baby warmer, baby scales and a change table where baby examinations are carried out daily. The lactation consultant office, an examination room, a breastmilk storage refrigerator, freezer and handwashing and other sinks used for cleaning lactation equipment are located within this space. A corridor is central and runs through the entire ward, allowing access to the women (appendix D. Images 1, 2 and 3). It can be shut off from the reception area by glass doors.

The research hospital website describes the available hospital accommodation and rooming-in options for postnatal women on the Hunter and New England Health website:

“The postnatal ward at John Hunter Hospital has mostly shared 4-bed rooms. This means that family members are unable to stay overnight with the mother and baby. There are a very small number of single rooms available. Women with more complicated postnatal stays are allocated to the single rooms as first priority. We also attempt to meet the needs of women who have private health insurance by offering a single room whenever possible.” (HNE website Viewed 4/11/2020).

Postnatal accommodation and artefacts of postnatal care

The postnatal rooms include an individual bed light and main overhead light, an electric bed with cot sides, a bedside cupboard with 3 drawers, an open cupboard space for storage, a standard chair, a breastfeeding chair, 1–2 pillows, a call bell with light, TV and radio controls, a television on the wall or hanging from the ceiling, an infant cot, an over-bed table, a green infant bath, a breast pump, and a postnatal pack containing information about issues such as safe infant sleeping and follow-up support.

The following photographs illustrate aspects of the environments encountered in the postnatal ward setting. Image 3.0 demonstrates a typical shared 4-bed room cubicle with the furnishings which include an electric bed with cot sides, a bedside 3-drawer storage unit and open storage space.

Image 3.1 shows a single room with extra space and two cots for a woman with multiple babies. The blue cot is particularly useful for women with limited movement following surgery as the sides can fold down onto the mother’s bed for easy access to the baby compared to the Perspex cot where the baby has to be picked up by leaning into the cot. Extra artefacts of the single room include a large armchair/ fold-out bed, and an en suite bathroom with toilet and shower.



Image 3.0: A shared 4-bedroom cubicle with curtains



Image 3.1: A single room

Methods

This section of the chapter details the range of methods undertaken to collect and analyse the data obtained within this ethnographic study. These include field notes and reflections 'participant as observer' observations, photographic images, semi-structured interviews with postnatal women and some partners in hospital and semi-structured telephone interviews with postnatal women 4-6 weeks after leaving hospital. Each method is described in detail. The section begins with the recruitment of participants.

Recruitment

Recruitment of participants in this ethnographic study required careful consideration as the postnatal ward environment was populated, not only by the women and their families, but also by professionals and support staff. Since the focus of this study was on the experiences of women breastfeeding, the professional and support staff were not part of the study, or to be included. The research proposal was presented and discussed, at the regular in hospital research committee meeting of the maternity service, and then to ward staff during in-service sessions. The study was carefully explained to the staff, and that the observations and interviews would only be from the experiences of women and their families. Hospital staff were not part of the study and there would not be any observations or comments on staff behaviour. Staff understood that if they were not comfortable with my presence observing the women, I would cease the observation and relocate to another part of the ward or to another period of time when the staff member was not present. No staff at any stage felt the need to ask me to cease my observations.

Recruitment of women and families

Using the inclusion and exclusion criteria described in Box 1, I aimed to recruit up to 20 well women for observation and up to 20 well women for interviews. Women classified as 'well' could include women with co-morbidities, operative birth, complications such as postpartum haemorrhage or perineal injury that did not preclude them from being admitted to the postnatal ward. Which rooms women were allocated, (single or

shared) did not influence who was approached to participate in the study, as rooms were not allocated until the women had birthed and managers had become aware of room availability. I aimed to recruit up to ten partners or family members for the interviews but if more came forward meeting the inclusion criteria they would have been welcomed.

At the qualitative research workshop, we received education on types of interview methods, techniques and achieving data saturation. During the literature review I read with interest similar studies to mine which helped me to decide on interview numbers. I would have accepted up to 20 women and ten partners/family members.

Box 1: Inclusion and Exclusion criteria

Inclusion criteria	Exclusion criteria
Well women	Unwell women
Mothers aged 18-40	Intending to formula feed
English speaking	Non English speaking
Singleton, term or preterm, well baby	Women with stillborn or unwell babies
Intention to breastfeed & remain in hospital	Women unable to provide consent
Willing to give informed consent to participate and comply with study requirements	Women with multiple pregnancies
Partners of women who were present in the postnatal ward	Women with serious mental health or substance abuse issues
Families of women who were present in the postnatal ward	

Method of recruitment:

Posters describing the study were displayed within different areas of the hospital attended by pregnant women, inviting them to take part in the study and to contact the researcher. Initially no women responded. Therefore, following discussions with study supervisors and hospital management, the midwives based in the postnatal ward informed the women of the study when they were admitted to the postnatal ward following birth. The admitting midwife provided interested women with information sheets and consent forms. Ten women and six partners who met the inclusion criteria returned signed consent forms and participated in interviews. One of the women recruited within the postnatal ward told me she had intended to enroll in the study but said she was so focused on the birth process that she had forgotten and was pleased to participate when asked within the ward by the midwife.

A notice was displayed in several areas of the postnatal ward when an observation period was being undertaken. Women and staff who had any questions were requested to contact the researcher on a mobile number provided. None did so. All participants were happy to go ahead, and no changes were necessary.

Data collection

This section describes the data collection methods used in this study. These were: using observation, field notes, photographic images, a reflective diary, and interviews.

Table 3. 1: Overview of data collection methods

1. Participant observation
2. Field notes
3. Photographic images
4. Reflective diary
5. Interviews

Participant as observer

In ethnographic research, the participant as observer or “field worker” participates and immerses themselves in the lived experience of the participants. The observer watches and records in field notes, the reality of the lived experience within the environment. Knowledge can be gleaned from the knowledge-holders (Silverman 2015). In this study, the knowledge-holders were the women, their partners, and other supporters who used the postnatal ward facility.

The observer, ethnographer, or fieldworker (all interchangeable terms) is the primary tool for data collection in ethnographic research (Silverman 2015). As a midwife and lactation consultant working as a “participant as observer” in the postnatal ward, I observed varying aspects of the way the environment was used by the participants, during the day and night, as well as during periods of high volume and intensity, and quieter periods of low-level activity. I undertook periods of observation on weekdays and weekends and over different hours of the day and night ranging from 0800 hours to 0400 hours. Participant observation allowed the researcher to gain a deeper understanding of how the environment impacted on women following admission to the postnatal ward after birth, and during the hospital stay. As a “participant as observer”, I provided support and an “extra pair of hands” within the postnatal hospital ward corridor (described more fully below). Staff, women, and visitors were aware of the study as posters describing the study, were displayed throughout the ward. The researcher’s role and designated observations times were explained to staff, (I would provide minimal midwifery or lactation consultant support) and women prior to the

observation period commencing. Wearing my uniform and identity badge, I blended in, and was easily identified as a researcher due to clipboard and pen and constant note taking.

Observers can be divided into four categories (Rees 2013). The first is a “complete participant”, where the researcher is part of the setting and carries out covert observation, meaning the participants do not know they are being observed. “Observer as participant” is where the researcher does not have any real involvement within the activities but observes overtly. In the case of observing through two-way mirrors or video link, the observer becomes a “complete observer”. Here, the researcher is unnoticed by the research subjects. I was a “participant as observer”, of whom the women were aware.

Observation checklist

An observation checklist was developed to guide me as the researcher during observation periods (Table 3.2). The checklist was developed on the basis of my experience working with mothers and their families in different hospitals throughout Australia and overseas. The checklist was a trigger to ensure all relevant data were recorded.

In Figure 3.3, the grey arrows show how, by standing in the corridor, I had visibility into the 4-bed room and two single rooms. If the curtains were open I could observe all activities which I recorded at five minutely intervals. If the curtains were closed, it was easy to hear who was present and what was occurring as the curtains were made of cotton. I also often made observations as people moved in and out of rooms. By standing in the corridor, I witnessed who entered and left the rooms and usage of showers and toilets off the corridor, as shown in images 1, 2, 3, 4 and 5 Appendix D. on pages xxx.

Observations were made and recorded in field notes of both how the physical space was being used, who was in the space and what occurred , over a range of differing times and periods of workload intensity and population density.

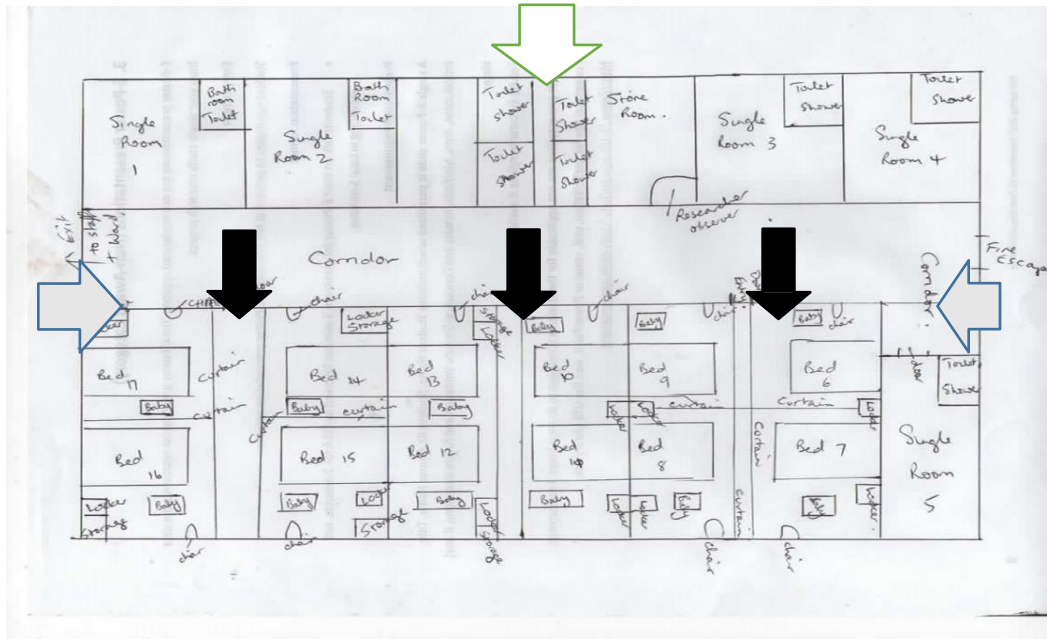


Figure 3.3 Layout of the Southern end of the Postnatal Ward, Rooms 1 to 17

The black arrows in Figure 3.3 demonstrate the 4-bed room entry points. The white arrow demonstrates the toilet and showers off the central corridor. The grey arrows demonstrate the observation points of the researcher.

Table 3.2: Observation checklist

Observation checklist	Single Room & en suite	Shared. 4 Bed-room. Shared Toilet & Shower off main corridor.
<p>Date and Time Ward Acuity Main corridor Description. Equipment in corridor Lights on/off Noise level Who is using corridor?</p> <p>Observed People in area</p> <p>Sitting area. Who is using EBM refrigerator usage Education events Baby checks</p> <p>Visitor numbers</p>	<p>Description of room & room layout & artefacts within room. Observed participants using room What were participants doing Sleep, awake, breastfeeding, pumping, eating, using technology, with visitors. Toilet & Shower within room. Hygiene with hand washing and cleaning facilities in room. Room temperature, ventilation</p>	<p>Room description with number of mothers & babies Room layout & artefacts within room</p> <p>Participants using room What were participants doing Sleep, awake, breastfeeding, pumping, eating, using technology, with visitors Lights on/off. Bed lights, central light Blinds in ward up or down Natural lighting Ventilation Curtain position, Open/closed Room temperature, ventilation</p>
<p>Bathrooms/Toilets central corridor, kitchen.</p>	<p>Kitchen usage</p>	<p>Usage patterns bathroom and toilet off central corridor</p>
<p>Partners/Family</p>	<p>Who remained Time stayed</p>	<p>Who remained Time stayed</p>
<p>Furnishings & usage patterns</p>	<p>Doors open/closed Window blinds</p>	<p>Curtain usage patterns Chairs</p>

Acuity describes my assessment as an experienced midwife of how complex the women and babies were and how busy the ward environment was during that observation period

Immersion

As a “participant as observer” researcher, I undertook light duties in the postnatal ward, which allowed my immersion and acceptance within the setting or natural environment of the postnatal ward. This allowed rapport-building while I undertook activities within the ward, which helped me learn and discover from the knowledge-holders, (the women and partners). The many hours of observation enabled a certain level of trust to develop between the participants and myself, so that I was able to talk with them, and focus on and explore the impact of the environment and its artefacts, rules and rituals. Subsequently, by interviewing participants, I gained further insight into, and understanding of the women’s day-to-day experiences. Initially, I had intended to be a “participant as observer” over a continuous six-hour period, over three shifts (morning afternoon and night shifts). However, the intensity of the observations required me to adjust my observations to 4-hour periods, which I did after discussion with my thesis supervisors.

As I am a midwife and lactation consultant known to staff, I was asked to assist women on several occasions. In these instances, I provided temporary support if there was no lactation consultant on duty but referred the matter on when a lactation consultant was available. Therefore, I helped, while maintaining the status of the researcher as participant.

Posters describing the study were displayed throughout the ward and midwives distributed consent forms to interested women, who the researcher would follow up and answer questions where necessary. During the observation periods, (Table 3.3), the midwife in charge of the postnatal ward identified consenting women who met the research criteria. These were usually four women from a shared room, and two women from single rooms. I placed myself within the corridor between these shared and single rooms to obtain physical proximity to the women as indicated in Figure 3.3. Thus, I was able to observe participants and their interactions in all spaces. From where I was situated, the flow and usage patterns of all areas of the ward were easily observed. I was able to observe midwives assisting women in wheelchairs and walking from the shared rooms to the bathroom and toilet facilities within the main corridor, as shown

in Appendix D, images 1, 2 and 3. The small kitchen area was visible and accessed by visitors to obtain iced water for women confined to bed, while ambulant women could be seen leaving the ward with family to access the cafes and other areas of the hospital. The corridor allowed access to the women for all users of the facility. By remaining between the allocated shared and single rooms in the corridor, I was able to constantly observe the assigned eligible women (see Appendix D, Images 1, 2 and 3, and Figure 3.4).

Field notes

The field notes were written, with each cubicle being described in five minutely intervals in an ongoing manner throughout the observation period to ensure an accurate account of what was being said and observed was recorded. Accuracy was ensured by writing field notes frequently with rich descriptions of the environment, numbers of people present within the space and what each study participant was doing at that time.

Photographs

During observation periods photographs of the environment and furnishings were taken to illustrate the environment and added to the field notes. Photographs were also taken of the participants (with permission) to illustrate the particular environment they were experiencing at the time. The photographs provided memory triggers and illustrative evidence when undertaking the analysis of the data.

Table 3. 3: Observation periods indicating hours of observation, rooms observed and acuity*

Date	Observation period	Type of Room	Acuity (high, medium, low)
Friday 5 July 2019	1500–1900 (4 hours)	4-bed room, beds separated by curtains, no door 2 single rooms with en suites.	High-medium acuity. Single room 1: Baby in NICU. Shared 4-bed ward full until 1700 when 2 mothers and babies discharged
Wednesday 17 July 2019	1900–2400 (5 hours)	4-bed room, beds separated by curtains, no door 3 single rooms with en suites. One single room has no door	Medium acuity until visiting hours ended. With 2 new admissions, acuity changed to high
Sunday 21 July 2019	1100–1500 (4 hours)	4-bed room, beds separated by curtains, no door 2 single rooms with en suites. One single room has no door.	Low to medium acuity. Single rooms, 2 infants in NICU**. 2 women in 4-bed room. At 1300hrs baby admitted from NICU into single room 5, to remain with mother. Shared room Bed 8: new mother and baby admitted
Thursday 25 July 2019	2400–0400 (4 hours)	4-bed room, beds separated by curtains, no door 1 single room (2 single rooms empty)	High acuity throughout
Tuesday 30 July 2019	0800–1200 (4 hours)	4-bed room, beds separated by curtains, no door 2 single rooms with en suites and doors	Low to medium acuity. Shared ward. Beds 10 and 12 remained empty. 2 babies artificial milk feeding.
	Total = 21 hours		

***Acuity: describes my assessment as an experienced midwife of how complex the women and babies were and how busy the ward environment was during that observation period **NICU: Neonatal Intensive Care Unit**

Reflective diary

A reflective diary was written during quieter periods within the observational period, and at the end of each field experience to record my own thoughts about what I learned from occurrences in the field and what should be noted for later analysis. Included in my reflections was an assessment, from my perspective as an experienced midwife/lactation consultant, of the complexity of care needed by the women and babies that contributed to the workload and busyness of the ward at different periods of time.

Interviews

Recruitment of Participants for Interviews

Staff midwives provided all eligible women (women who met the inclusion criteria), admitted to the ward from the beginning of July 2019 until the end of July 2019, with verbal and written information about the study. Those who were interested signed a consent form to enable the researcher to approach the woman and further explain the study and to answer any questions. Around twenty women, were approached by the staff midwives and ten agreed to participate. Six partners also agreed to participate in an interview. Couples were interviewed together, and pseudonyms were used to protect their privacy.

Semi-structured interviews

Semi-structured interviews were chosen as the most appropriate method for gaining women's and partners' perspectives on their experiences. Semi-structured interviews fit well within ethnographic methods of data collection as they enable the voices of participants to be heard. Semi-structured give a greater opportunity for participants than a more rigid survey type interview with yes/no answers and add richness and authenticity as participants may speak more freely. An interview guide using trigger questions was informed by the concepts described in the review of the literature as contributing to women's experiences, and the experience of the researcher as to what women have described over many years as contributing to their breastfeeding experience in hospital (Appendix B;1 and B:2). In order to obtain an assessment of how important it was to the participants to have a partner or family

member present throughout their postnatal stay, and to put a 'value' on it, a single Likert scale question was asked at the end of each interview. The question asked, 'On a scale of 0-5, how important is it to you to have a partner or family member stay throughout your postnatal time in hospital?'

The interview guide is located in Appendix B. Interviews were held in single rooms, or in a private office space, for most women in shared rooms. Three women within shared rooms said it did not matter to them where they were interviewed as they did not care if they were overheard or not and remained in their bed inside their curtained cubical. The interviews were audio-recorded and conducted in a semi-structured manner to allow the new mother and partner to tell their own story of the in-hospital post-natal ward experience. The trigger questions were used only to ensure all questions were answered and keep the interview from going off research goals.

Interviews undertaken in the hospital environment took around 40 minutes each. Four to six weeks after discharge from the hospital, the women participants from the study were sent a text message and asked to participate in a brief follow up interview to reflect on their experiences and to invite any further suggestions for improvements to the postnatal environment. I also asked if the woman was still breastfeeding or not. The follow up interviews took around 10 minutes and while some were audio recorded others were not, as the woman telephoned me at times suitable to themselves. In these cases I took notes rather than ask the participant to ring back as I had already lost three women to follow up and did not want to cause any inconvenience. The interviews were fully transcribed for analysis.

Data analysis

The data were analysed and contextualised using a deductive approach. As described above, data from the observation periods in the form of field notes, photographs, a reflective diary, and transcribed interviews were analysed using reflexive thematic analysis. Braun and Clarke (2006) provide a six-step process for the thematic analysis of qualitative data as described in Table 3.4 below. Whilst the authors provide 6 steps, these are not required to be undertaken in a sequential way as often the steps occur simultaneously.

Table 3. 4: Phases of Thematic analysis (Braun & Clarke 2006)

Phase	Description of the process
1.Familiarizing yourself with the data:	Transcribing data, reading and re-reading the data, noting down initial ideas.
2.Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3.Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4.Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level1) and the entire data set (Level 2), generating a thematic “map” of the analysis.
5.Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and overall story the analysis tells, generating clear definitions and names for each theme.
6.Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

The observation periods and hospital interviews were analysed as soon as possible after completion. The post discharge hospital interview undertaken at 4-6 weeks were last due to timing and an inability to contact three of the women.

The data were read and re-read as well as the audio interviews being listened to repeatedly to become familiar with the data and to generate initial codes. Words or phrases from the various transcripts were colour coded. Reoccurring words and phrases generated different patterns or categories, which were listed and filed in a systematic manner. Images that reflected the phrases or words generated were also filed, with the relevant coded material. For example, if the code included the word ‘curtains’ I

incorporated images of curtains and stories of how the curtains were used. Many of the words or phrases generated in the lists overlapped, an example being “noise”, “too noisy to rest” or “curtains did not block out noise”.

On completion of the data collection, because the data transcription and colour coding had been ongoing, familiarisation with the data was well under way. Initially the field note descriptions appeared as a list of dates and times and made for mundane reading, not making much sense. It was not until searching for themes began, that the categories of colour coded data came together. The field notes had developed into repetitive patterns and formed themes and sub-themes which became exciting, and made for interesting reading and discussion. Reviewing and naming of themes was done in conjunction with my local supervisor as the COVID pandemic lockdowns had come into play and travel to Sydney had ceased.

Themes and sub-themes were generated. Van Maanen (2011) describes how the participant as observer conducts field work and shares firsthand the experiences of the environment, with the specific problems, background, rituals, language and the social relationships within a specific group of people. This information is then interpreted by the ethnographer and ultimately written into a narrative to be shared (Van Maanen 2011). The themes were reviewed and refined by myself and one of my supervisors in order to develop the final two main themes and six subthemes described in the next two chapters.

Reflexivity

In acknowledging my role in this research and recognising my prior experience with beliefs and assumptions which may influence this study, I went to the literature for guidance. Maintaining credibility and rigour was important to me as for more than forty years I have been subjected to accusations of breastfeeding bias. The literature made clear researchers maybe positioned by their place in society and maybe influenced to write or publish from their perspective (Chiseri-Strater, 1996). It is my place as a midwife and lactation consultant which has given me unique knowledge as a breastfeeding expert which qualifies me to undertake this study. I can see gaps in the breastfeeding environment due to the changing nature of hospital birthing

practices which impacts breastfeeding. It is my knowledge base into the physical, emotional and environmental benefits of breastfeeding which drives this research. Hence it is impossible not to have a degree of bias or a somewhat value-laden position. In stating this potential bias, I am declaring my knowledge base and declaring a position of “empathic neutrality” (Ormston et al. 2014, p. 8) which I endeavoured to maintain throughout the study. By designing this critical ethnography, I aimed to learn from women and their families, to hear their voices and witness what they experienced within the current postnatal ward setting when learning to breastfeed. By learning from the users of the facility, changes such as improved design may occur, to positively affect women’s breastfeeding experiences.

Ethical issues

Ethics approval was granted by the Health Research Ethics Committee of the Local Health District in which the hospital is located, as well as UTS Health Research Ethics Committee, as per UTS requirements. The main ethical issues were non-coercion and informed consent to participate. No identifying participant information was used in this study and will be used in any future publications arising from the research to ensure confidentiality of participants’ identities. Pseudonyms were used for each participant to ensure anonymity. Confidentiality will be ensured by keeping any identifying information in a secure file on a password-protected computer with access only by the researcher and her supervisors or STASH, the data management storage at UTS.

Summary

This chapter has provided a detailed description of the study design and setting chosen to explore the relationship between the environment and breastfeeding women during their postnatal hospital stays. Methods of data collection and analysis, mainly associated with interviews and observations, as well as potential ethical issues highlighted by the ethical committees involved, have been described aiming to ensure study participants have been protected by maintaining confidentiality and non-identifiability. The next chapter presents the first of two chapters describing the study findings.

Chapter 4: Study Findings: “Being on guard”

The findings of the reflexive thematic analysis were taken from the observations, field notes, reflective diary and interviews and are presented in the next two chapters. This chapter begins by describing who participated in the study and presents an overview of the two main themes and subthemes that emerged from the data analysis. The first major theme of “Being on Guard” is presented in detail in chapter four followed by the second major theme in chapter five.

Study Participants

Nine women and six partners were interviewed during their postnatal hospital stay and reflect the complexity of women who remain in hospital. One woman (Kath), who had augmented breasts was desperate to go home but was experiencing breastfeeding complications due to the breast surgery agreed to be interviewed when she returned for breastfeeding follow up two days after hospital discharge. Five women were located in single rooms and five in shared rooms. Three of the women had experienced both the single and shared rooms during their hospital stay and were able to compare both environments. Table 4.1 describes the women’s age, parity, mode of birth, complications of birth, breastfeeding outcome as well as the type of accommodation they experienced and whether their partner was present in the room and was also interviewed. Pseudonyms have been used to protect the confidentiality of participants.

Table 4. 1: Demographic details of interview participants. All women with partners were interviewed in hospital, together; breastfeeding outcome interviews at 6 weeks were with the women only; Kath was interviewed in the breastfeeding clinic at 9 days postnatal.

Woman	Partner	Age, years	Parity	Mode of birth	Complexity/complications	Room type Days stayed	Breastfeeding Outcome at 6 weeks
Liz	Peter	24	Primip*	NVB**	+PPH, 3 rd degree tear	Shared 1 day Single 2 days	Unable to contact therefore no data
Helen	Harry	27	Primip	Emerg*** C/S	Preeclampsia Seizures	Birth suite 2 days Single 2 days	Unable to contact therefore no data
Kate	Matt	28	Multi	NVB	Precipitate labour 3 rd deg. Tear	Shared 1 day Single 1 day	Breastfed for 5 weeks
Cheryl		19	Primip	Emerg C/S	Premature infant NICU	Single 8 days	Breastfed for 8 days
Kath		29	Primip	Instru- mental birth	Preeclampsia Previous Breast surgery	Shared 3 days Single 2 days	Breastfed for 2 weeks.
Mary		42	Multi	Elective C/S	Jaundiced baby	Shared 7 days	Breastfed for 14 days
Jane	Sean	30	Primip	Emerg C/S	Nil	Shared 5 days	Continues to Breastfeed at 6 weeks,
Jessie	Camero n	29	Primip	NVB	Nil	Shared 2 days	Continues to Breastfeed at 6 weeks
Nari		25	Primip	Emerg C/S GA	Preeclampsia 33-week premature baby	Shared	Unable to contact therefore No data
Hayley	Shane	24	Primip	NVB	1.5L PPH	Shared 1 day	Breastfed 1 day

***Emerg/CS: Emergency caesarean; GA: General anaesthetic; **NVB: Normal vaginal birth; Multi: multigravid; NICU: Neonatal Intensive Care Unit;

*Primip: Primigravid; +PPH: Post-partum haemorrhage

The women were aged between 19 and 42 years which is reflective of the typical birthing population in this community (AIHW 2019). Two women were multiparous and had birthed their second baby. Four women had a vaginal birth, five had a caesarean section and one an instrumental birth. There were only two women who had experienced no complications of their birth. These characteristics reflect the population of the postnatal ward environment in this setting. Five women were observed in single rooms, although two had also been accommodated in a shared room prior to moving to the single room and were able to compare both environments. Kath moved to a shared room after two days spent in a single room. At follow up, only two of the seven women from the original ten who could be contacted were continuing to breastfeed.

Major themes and subthemes arising from this study

The following table (Table 4.2) lists the two main themes and six subthemes arising from this study. The themes of 'Being on guard' and 'Building a nest' reflect the experiences of the shared and single rooms that the women experienced, and how these environments impacted on their ability to breastfeed.

Table 4. 2: Major themes and subthemes arising from this study

Major theme	Subthemes
1. Being on guard	1.1 You just feel the noise
	1.2 Behind the curtains
	1.3 Babies at the desk
2. Building a nest	2.1 Space for supporter to stay
	2.2 Feeling protected and supported
	2.3 Furnishings to support breastfeeding

Theme One: “Being on guard”

“Being on guard” describes the constant state of heightened alertness expressed by women in shared accommodation. Women felt on alert in case a stranger should open the curtained space surrounding her while she was breastfeeding or expressing breastmilk. The small amount of space between the beds in the 4-bed rooms with curtains separating the beds was inadequate to protect the woman’s privacy and confidentiality. The gender-specific and intimate nature of birthing and breastfeeding, expressing breastmilk and being naked to provide skin-to-skin contact with their infants made the women vulnerable to embarrassing exposure, as the curtains were easily and often opened, purposefully or accidentally, by people brushing past. This is a stressful state that was reported by most women in the shared rooms. Peter, whose partner had spent one night in the shared room while in labour before being moved to a single room, said:

“I am surprised how these areas are, just the curtain, being postnatal, breastfeeding and stuff like that you’d want privacy, I think, and having a curtain there, other than a wall” (Peter, partner of Liz who experienced both single and shared rooms).

Appendix D, Images 4, 5, 6 and 7 reveal the visual impact of the curtains within the 4-bed room when opened or closed and the space available to move around in the room.

Four of the 10 women selected for interviews had experienced an emergency caesarean section and one, an elective caesarean. All five women said they had been extremely stressed. One woman described how she had unexpectedly been taken to the operating theatre at 3am as her baby was presenting as a breech, an emergency situation, which both parents described as frightening. Three mothers interviewed had emergency caesarean sections and premature infants requiring admission to the special care nursery. Two of these infants and mothers had been flown in from rural areas following an emergency caesarean section for high blood pressure. They were

extremely stressed leaving behind their local communities and their partners and described how important it was for couples to remain together to provide ongoing emotional and physical support to each other and their infant. All mothers described how their lack of mobility due to the pain or opiates following the surgery made it almost impossible to manage breastfeeding or express breast milk alone. The fifth woman who had a repeat elective caesarean birth remained in hospital for nine days. Her small baby required three hourly feeds, was sleepy and not wanting to feed. When interviewed she was very stressed and unhappy in the shared ward due to lack of sleep, 3 hourly breastfeeds/pumping, no family support overnight, noise from visitors throughout the day, lack of privacy, noise through the curtains, and the curtains being pulled open either accidentally or on purpose causing embarrassment when pumping or breastfeeding.

Compared with women in the shared rooms, women in the single rooms felt they had control of their environment. Privacy and confidentiality could be maintained. Having access to an en suite bathroom attached to the single rooms prevented the women from being exposed to situations which were embarrassing. Appendix D, Image 10 and Image 3.1 reveal the attributes of the single rooms that provide increased privacy, comfort, and control.

In comparison, during an observation period a first-time mother in a shared room was overheard telling her family how humiliated she had been due to leakage of blood and urinary incontinence in full view of afternoon visitors. She had to come out from behind her curtains in the shared room to go to the toilet off the main corridor (**FN 5/7/19 1500-1900 Bed 17, 1700hrs**). The relatively public location of the bathroom and toilets for women in the shared room and the lack of privacy is illustrated in Appendix D, Images 1 and 2.

Women in the single rooms reported having more privacy. *"You can close everything off" ... "you can close the door, and you've got your own toilet and shower"* (Liz). In single rooms many women said their privacy was enhanced and rest was possible because *"...I can shut the door"* (Kate). Kate's partner, Matt commented that *"...people would knock"* [before entering].

Kate experienced both a single and shared room during the postnatal period. She described the differences in privacy between them. Kate, spent one day in the shared room (Images 4, 5 and 6) and was then transferred to a single room when a bed became available as she was privately insured (Image 10 and 3.1). She reflected on both rooms:

“Definitely the privacy is better in this single room, but because this is my second baby, I’m probably less self-conscious of it. The last time I was more self-conscious, but this time I’m a bit more open about it, but you do feel like the curtains will be opened at any time [in the shared room]. You’re always cautious” (Kate).

Kate commented how the curtains in the shared room contributed to her lack of privacy and embarrassment, as seen in Images 4, 5 and 6. Kate’s experience reflected a situation described by many women within the shared room:

“Yes, they have the curtains around, but like yesterday when I first got there, um, the nurse was actually having a look at my cut and checking my pad and everything, and the kitchen lady came and just opened the curtains and my bed is the first one near the walkway [corridor] and the nurse got really annoyed with her, um, I suppose that’s one thing and when they were talking about taking the catheter out. I’m glad I’m in the single room. Even though you’ve got curtains people keep brushing past” (Kate).

Kate also commented on her feelings of exposure and embarrassment, explaining she had urinary urgency. When using the shared toilets located in the relatively public main corridor of the ward toilets (Images 1 and 2), she did not like it:

“In this single room we can turn all the lights off and shut the door and having the en suite bathroom as well, it made it a lot easier to get up. A couple of times I thought, ‘Ooh, I need to go quickly,’ and in the other shared room it was just across the hall in the corridor but because you need to check that it [the shared toilet] is empty, and you’re in front of everyone” (Kate).

Feeling awkward because of the lack of privacy and having to juggle toiletries when bleeding vaginally was also described by Jessie, a first time mother who talked about

her stress and embarrassment when using the shared shower and toilet, as illustrations Images 1 and 2 show:

“...because a couple of times I’d want to have a shower and I’d go out there and it would be full. You’d have all your stuff, so I’d go there and come back in, and you’d only be able to get in there when you’ve got your baby down [to sleep] or whatever and the other thing is with the bleeding and there were a few times I hopped up and was bleeding onto the floor, and it was awkward” (Jessie).

Images 4, 5, and 8 in Appendix D, show there was very little room within the 4-bed room between beds and image 6 demonstrates the limited space within the curtained cubicle for the mother to sit beside the bed to breastfeed. Even though she may have been able to make a visually private space by pulling the curtains around her, she would have been aware that at any time the curtains could be opened, either accidentally or deliberately. Images 4, 5 and 6 reveal the narrow spacing between the curtains. This is a potentially threatening and therefore physiologically, stressful space. Field notes taken during an evening observational period describe a potentially embarrassing situation. A woman had asked me to nurse her baby while she had a shower. She was topless behind the screens as the male kitchen staff was opening the curtains to deliver supper. I was fortunately able to intervene and protect her privacy.

Bed 24. I realised mother topless behind the curtains due to damaged and painful nipples and mother not in bed but walking around holding baby. I intervened and asked if mother would like supper, which she did, and protected the woman’s privacy by collecting food from trolley and giving to woman. Young male catering staff was prevented from opening curtain, and embarrassing the woman or himself. (FN 17/7/19, 1500-1900 at 1940hrs).

Threats to safety were raised by the women. They were observed to occur in many ways, firstly, due to the confined space and closed curtains in the shared wards, the lack of visibility was problematic. The women were on high alert as people and equipment would bump into things, potentially causing accidents. For example, meal trays containing hot food could be bumped. This was an unsafe situation since there may have been babies asleep in cots or a mother feeding in a chair, unseen behind the curtains. Images 4, 5, 6 and 7 reveal how easy it would be to bump into someone or

something unseen behind the curtain, due to the lack of visibility and space. During several observation periods and over differing mealtimes, I heard direct requests from the kitchen staff asking for the curtains to be opened to deliver meal trays. These requests were mostly ignored, and field notes recorded explained this:

4-bed room curtains remained closed throughout observational period despite direct request by kitchen staff to open them at dinner time. Mother in bed 14 had had a meal brought in by husband. The woman from Bed 15 was being discharged home, and wanted to leave. The woman from Bed 16 had gone home and the woman from Bed 17 was asleep and husband took meal from kitchen staff to protect his wife from being woken, and quietly placed tray on a chair behind curtains for later eating. (FN 5/9/19 1500-1900).

The narrow corridor effect created when all four women had closed their curtains, as shown in Images 5 & 7, made it almost impossible not to drag open the curtains if moving equipment, such as the medication trolley, or going to the opposite wall to access the woman's bedside notes (Image 7).

The women were constantly on guard, as described by Nari:

"You can't even control your curtains...obviously they don't make the spaces that wide so when someone walks past, they open in some direction" (Nari).

Because of the lack of space and privacy, women did not feel adequately protected, and were sometimes stressed, with only the curtains separating them from an unknown person occupying the opposite or adjacent bed, or their family members or visitors. Kath said:

"It depends on who is in the room. There was a lady down the hall who was a nut case, and I could hear her yelling and screaming. If she was in my room, I probably would have been slightly scared" (Kath).

Jane was concerned and had brought eye pads and ear plugs to help her to rest but did not use them until her partner was present to care for the baby, saying:

"Sometimes there are junkies and that, so if that's gonna happen, I can just block it out" [if my partner is here] (Jane).

Mary spoke of breastfeeding as being an intimate act, and of the close proximity of

unknown visitors behind the curtains making her nervous:

“The rooms are very small and the distance between the curtains and distances are so small that people walk past and the curtains fly open and when you are pumping and breasts exposed, privacy is not adequate...it's not the easiest process and you do want a bit of dignity and I do feel like I haven't really had that. I find that a bit frustrating. When you've got visitors in the other room and you've got a pump on each breast you do want a bit of privacy” (Mary).

At the follow-up interview 4 to 6 weeks after hospital discharge, Mary spoke about the lack of privacy and re-iterated:

“I'm a private person and the meals would come in, men [would deliver the meals], and I was pumping, not private at all... it's an intimate thing and you feel so exposed!” (Mary).

Three subthemes emerged from the analysis of “Being on guard”. These were “You just feel the noise”, “Behind the curtains” and “Babies at the desk”. The following descriptions define each subtheme and provide evidence illustrating the theme.

Subtheme 1.1: “You just feel the noise”

All the women discussed the impact of noise within the ward, and the confined and busy space of the shared rooms. They described how the noise of four mothers and new babies, together with their families and visitors to the ward, and the people caring for them, inhibited their ability to rest and recover. All the women said they were tired, and the constant noise undermined their ability to focus and learn how to care for their infant and breastfeed. The volume of noise was a constant reminder that they were in an unfamiliar place, in the company of many strangers who threatened their privacy and sense of calm.

Visiting hours in the study setting were permitted from 8am until 8pm and contributed to a constant flow of people in the rooms during those times. A rest period, was designated following lunch when the glass doors were closed until 3 p.m. This time provided a quieter period where women could rest, and partners (image 8) or a support person sometimes remained, to care for infants. Hospital routines were observed to continue regardless, with collection of lunch trays, bedside staff shift

handovers, admissions and discharges of women and infants for example. In single rooms women could restrict the number of people in their room by closing the door, while women in shared rooms could not. Using cotton fabric as a barrier for curtains between the beds, as illustrated in images 4, 5 and 6, meant resting women in shared rooms were disturbed by unimpeded noise. Many women within the study, spoke of their lack of sleep and tiredness, not just because of their babies but also due to the hospital environment.

Mary said:

"I'm getting about 3 hours sleep per day, partly because my baby has been waking but when I did get rest, visitors would be turning up and I would get woken up. Normally if you are asleep 'nurses' will leave you alone unless they need you and will call your name, but yeah because the rooms are so small you just feel the noise and you don't get the proper rest that you need" (Mary).

During an afternoon observation period, the woman beside Mary's bed within the shared room spoke to a midwife while walking to the toilet in the corridor (Image 1, 2 & 3, Appendix D). She requested early discharge home. She was less than 24 hours post-caesarean section. The average stay after a caesarean section in this hospital is 3 days, with some women remaining for up to 5 days. In the staff hand-over the woman was described as *"Primigravid, day one, emergency LUSCS. Cluster breastfeeding. Ambulating"*. During the observation period she slept most of the time and was entirely dependent on her partner for assistance in and out of bed and for baby care. Field notes record:

1530-1600, Bed 14. Mother continues to sleep, while father of baby remains in chair beside bed watching T.V. and nursing baby (Image 6, Appendix D demonstrates television location). At 1550 the very pale mother walks slowly from behind curtain to toilet in corridor and washes hands in corridor sink before returning to bed. Mother requests discharge home from midwife in corridor for the following day. In field notes I wrote, "Woman in bed 14, day one caesarean section, looks pale and obviously still tender walking several times along corridor to get to toilet. Her husband has helped her from the bed and helped her when she returned but she walked alone, looking drawn, while the hubbub of hospital routine went on around her". (FN 1500-1900 Fri. 5/7/2020).

Images 1, 2 and 3 in Appendix D demonstrate toilets located off the main corridor for women in the shared rooms. The hand basin (image 2) in the public corridor outside the shared room is the only nearby location where women can wash their hands.

I did not have consent to interview the woman in bed 14 and could not ask her why she wanted to leave hospital so soon after her Caesarean Section. I did however interview Mary, who was in bed 15 beside her. Mary had been in hospital seven days when interviewed, and was tired and very discontent. When I asked Mary about her ability to rest in hospital, she replied:

“Well, you see the lights from the other beds if they’ve got them on, and if it’s quiet the TVs are quite loud & because the curtains are light it doesn’t really block out any of the light from the other beds” (Mary).

Following discharge at the 4-6 week interview Mary said, “there was no quiet time to allow rest to occur”.

It is unusual for a first time mother to request to leave hospital so quickly after a caesarean section. Mary had complained during her interview about the light, and noise through the curtain which would have been exacerbated during the night as staff provided post-operative care to the lady in the bed next to her following her new caesarean section. Mary also complained about the television noise from the next bed, which may have influenced her roommate’s preference for going home.

Hayley was upset and weaned her baby, leaving the shared ward immediately after the research interview (one day spent in postnatal ward), saying:

“If they could minimise the noise and do something more than a curtain, it would be good...You guys [midwives] were in the room most of the time as you knew we had had a rough birth ... It did quieten down ... Yes, [I managed to get] 4 and a half hours [sleep] and considering I hadn’t really slept in 3 days” (Hayley).

Field notes recorded that midwives appeared very mindful of the needs of the women. During afternoon rest periods or at other times when mothers were resting, they were seen talking at a distance away from the mothers in more remote spaces in the ward,

such as a storeroom or within the corridor outside the shared rooms, to let the women sleep.

Nari described how she fell asleep due to tiredness and spilt her expressed breastmilk while she was pumping to feed her baby in the neonatal nursery:

“Then it’s the routine down here too. They all cry and then the lights are on and one sets the other off. It does get quite challenging...You hear a baby crying and yours is upstairs. It doesn’t sound far but, you’ve got to express every 3 hours and you’ve got to try and get yourself up and then you’re back down here and you only get 3-4 hours’ sleep, at the most every day. I try to get at least 4... um but it’s hard... Being so far from baby has meant 3-4 hours’ sleep in a 24-hour period and other babies crying makes it hard.... I express here on the bed and sometimes I nod off and I’ve spilt some of the goods, there’s that moment of silence and the sound of the machine swishing” (Nari).

Kath, who experienced both the single and shared wards, said:

“I’m not really a day sleeper and I mainly had one sleep a day, but I hate sleeping during the day, but I knew I needed it”. Interviewer queries: “So was that in the single room or the shared room?” Kath: “Yeah, more so in the single room, but in the shared room it was harder due to the noise, but I would try and make myself lie down in the shared room too” (Kath).

Having solid walls and a door in single rooms, means the women have more opportunities for rest and sleep whenever they want. As baby care allows they can block out the noise and light to rest. This is not the case for women in the shared rooms, because their ability to rest is inhibited by the inadequacy of the environment. Curtains, do not protect women from ward noise, other babies crying, light and visitors. During an evening observation period, field notes described the scene in a nearby common room (images 15, 16 and 17) where a mother had gone seeking quiet:

TV on, in old night nursery, [common room] which has been quiet and empty throughout observational period. Now occupied by mother post C/S in

nightdress, slippers and TED stockings. She appears to be enjoying the quiet empty space. Her shared room very noisy with constant crying infants and many visitors (FN Observational Period. 1900hrs. 2400 Wed. 17.7.2019. 2000hrs).

Some of the single rooms were without doors as they had been removed at some time in the past to fit wide beds through without damage. Therefore, without doors to some single rooms and no doors on any of the shared rooms, as can be seen in Images 1, 2 and 3, women were impacted by corridor noise and infants crying. Field notes recorded that between 0050 and 0210 a woman alone in a single room without a door could not sleep and called her partner, upset. She had woken and came from her room to tell the researcher that she was dizzy, a condition which required midwife intervention and medications. She had remained in hospital for 5 days as her baby was in the nursery (NICU). She had had an elective lower uterine segment caesarean section for preeclampsia and underlying hypertension. This observation was summarised from field notes due to the length of the observation field note (FN 25/7/19, 2400-0400).

Within the northern end of the postnatal ward, one 4-bed bay was used to observe antenatal women overnight. Because there were no doors on the shared rooms and the women in early labour needed frequent care, sleeping women were disturbed, as the field notes recorded:

Beds 18-21 [a 4-bed room] used to accommodate antenatal women in early labour or antenatal women being observed overnight. Some women have family members remain. Midwives and medical staff in and out of the four-bed room monitoring the women. With no door, noise of cardiotocograph monitoring machines can be heard in neighbouring rooms, and the visitors and staff talking in corridor. (FN 17/7/19 1900-2400, FN 25/7/19, 2400-0400).

The 4-bedded room that was being used for antenatal women in early labour such as Liz and Peter when in early labour, is at odds with the postnatal woman trying to sleep in rooms nearby, as there were no sound barriers and the noise was constant. As the

antenatal women share the toilets and showers and small kitchen with the postnatal women on the ward, their support people also use these facilities, and during the night time observation periods family were observed talking within the corridor while using the kitchen as postnatal women were trying to sleep. The 4-bed antenatal room was not designed to house pregnant or laboring women and family after visiting hours. With no public toilets on the ward or commercial cafes open at night relatives had few options.

1.2 Subtheme: “Behind the curtains”

The subtheme, “Behind the curtains”, describes the environment for women in the shared 4-bed rooms, and how the lack of physical barriers to protect the women with differing needs impacted upon them. Individualised care was difficult to achieve quietly and without disturbing the other women within the shared rooms. Without a family member who could remain overnight to help, the women were isolated. While some women had recently undergone a surgical birth requiring close observation by the midwives, other women required assistance with infants feeding frequently, or breastmilk expression for infants located in the neonatal nursery. By being restricted to the bedside within close proximity of other women and few quiet spaces to feed or settle a crying infant, women were inhibited by an environment which did not cater to their varying needs. Behind the curtains, women could not protect themselves or the other women from noise or light. Women within the single rooms could have partners or family members remain to provide emotional and physical support, however hospital regulations did not allow this to occur in the shared rooms overnight. Partners or other support people who may have helped the women during the day had to leave at 8pm. While women had the support of partners or family members in the single rooms, women in shared rooms did not, and were dependent on the midwives. This was problematic because if the ward was busy, the women were alone and may have to fend for themselves or wait until the midwife became available.

Conversely Kath, whose partner did not stay when she was in the single room for 2 nights, described how she preferred the shared room where she remained for 3 further nights. She liked the other women’s support and described what it was like at night

“Rooming-in didn’t bother me. Midwife was coming and going, and you would

get as much sleep as you can, and I did find it really helpful. I probably found it really helpful when she was assisting other people as I've got big ears and that was comforting for me. I know the girl in the bed across from me at one point, kind of announced she wasn't getting any sleep because the lady next to her was crying and my alarm was going off. So of course, for me my alarm is going to go off, I didn't want to miss it" [small baby's 3-hourly feed]. (Kath).

When visiting hours ended, it was also apparent that the midwives' workload increased and women had to wait for attention. Women tried to manage on their own behind their curtains within the shared rooms, and in field notes I recorded that relying upon the midwives for immediate help was often problematic. Observation period field notes record that without partners or a family member present to provide support for the women and babies, the ward environment became busy and noisy as midwives went about their work.

“Following the end of visiting hours the ward seemed to go crazy. Midwives running to keep up with bells ringing and observed fetching ice, changing nappies, and helping mothers who had no partners or close relatives with them, which was predominantly shared-room women”. (FN 1900-2400 Wednesday 17.7.2019).

During the same evening observation period, some fathers were observed leaving reluctantly. One man who had remained throughout the observation period, supporting his partner and helping with baby care, seemed concerned and did not want to go. When slowly backing out of the room he said, *“Good night honey, try and get some sleep.” (FN 2005hrs Tues. 17/7/19 1900-2400 Bed 29).*

In a single room Harry was able to help Helen with expressing and feeding her infant as she was unwell and on medication to prevent seizures. Harry had remained at the hospital all of the time saying:

“Firstly, there was the emergency C/S and instead of having to go home I didn’t have to worry all the time or wait till morning, I could be there and help which was good” (Harry).

When asked about resting and breastfeeding Harry said:

“the first night was good because we got a “hibernation sleep” of about 5 hours on that night but the rest of the nights were a bit touchy as of course we were trying to hand express the colostrum plus trying to feed him out of the little cup, the formula, so we were up and down every few hours the second and third nights so there was not much sleep” (Harry). Helen added, “He sort of wouldn’t settle and every-time we tried to put him down he would cry” (Helen).

In the interviews, women who had experienced single and shared rooms said the amount of midwifery care was the same in both single and shared ward areas.

In a single room following heavy bleeding, Liz reflected what was said by many of the mothers regarding midwifery care:

“Um, I think in general they might need a little more staff just because they’ve got a lot of people they’ve got to see and it gets pretty busy in here and you press your buzzer and you’ve got to wait a few minutes, but everyone is kind of friendly and helpful and tries to attend to your needs if that’s possible” (Liz).

When asked if there were adequate staff to help, Kath replied:

“I know there was so much to do that sometimes you’d ring the buzzer and it would take a bit for them to get to you. It didn’t bother me. I know how busy they are, or sometimes someone else would come in and I wasn’t bothered. I knew sometimes it would take ten minutes, but someone would come eventually. They’ve got 6 people to care for, twelve really, with the baby” (Kath).

Jane spoke of her difficulties with lack of mobility and pain during the night within the tight space of the shared cubicle, without her partner to help:

“The only thing that happened was when the catheter was in. The baby needed to be changed 3 times. Two of the times the midwife did it and one of the times the midwife who wasn’t my midwife on the ward. She just gave me everything and it was hard for me to turn around and it was really difficult. I can do it now as I can get up and stand and it is easier. I can tuck him in and wrap him. It was only once and in the middle of the night” (Jane).

Overnight in the shared rooms, the women remained in the curtained and confined cubicles, without family support. They were not independent of the other women and babies' activities. The curtains did not block out the individual bed lighting or the noise of the other women or infants in adjacent or opposite beds, and impacted women's ability to sleep during the night. Women were mindful of disturbing the other women, suggesting that dimmer lights would have been helpful, or thicker screening curtains so the light did not penetrate. Field notes observed that:

Some women put their babies to the breast to quieten them, often in the dark.
(FN 27/7/17 Bed 29, 2400-0400).

When asked to reflect on what might improve the shared room experience, Jessie said:

"Probably be the air thing, yeah, that would be my thing, fresh air and maybe a night light. Maybe the option of a dimmer switch to check the baby is on properly when you are trying to breastfeed" (Jessie).

Jessie, a first time mother, left hospital after two nights as she wanted her partner to be with her and share their parenting experience. Jessie was seen to have severe nipple damage at two weeks post-partum when followed up in the breastfeeding clinic. Her nipple damage was due to a tongue-tie in her baby which was difficult to diagnose. Jessie said at the post-discharge interview:

"Probably looking back now I should have stayed another day or two as I thought I had the feeding under control but then I had all that damage and they didn't pick up on the tongue-tie" (Jessie).

Jane explained that she felt confident in shutting out from the room to rest when Sean was present, as she did not have to stay awake to listen for the baby. Sean cared for their baby while she used eye shades and ear plugs to sleep during the visiting hours:

“So balancing the time and sleeping, I had a nap yesterday and put ... [ear plugs in and eye shades] on, as Sean was around [to care for baby] but the room really hasn’t been that loud, and I haven’t had to use them at night at all.” Interviewer asks, *“So the nights have been OK?”* and Jane replies, *“Yeah, it’s more when you’ve got visitors”* (Jane).

While sleeping, women were impacted by the noise of midwives caring for other women within the shared rooms. Trying to provide support in the semi-dark so as not to disturb the other sleeping women was seen to be challenging for the midwives and potentially impacted on the care the women received.

During an observation period, one woman who was awake for large parts of the night due to engorged breasts was apparently too inhibited to turn on the lights within her shared room cubicle. She was observed and overheard whispering with the midwife so as not to disturb her room-mates while constantly feeding her unsettled infant. The field notes indicate:

2400hrs, Bed 28 shared room, Mother awake breastfeeding. Using light from nurses’ station in ward for visibility [Image 7 demonstrates light illuminating patient notes located on the wall notes holder space within shared rooms] ... 0110hrs Bed 28. Baby in cot, unsettled and grizzly. Mother trying to soothe....0200hrs Bed 28. Midwife checks mother behind curtain, whispering to ask her if she is feeling more comfortable to which mother replies, “Yes”. Midwife and mother talk quietly, then midwife removes sponge bowl and iced towels which were used for cooling breasts. (FN 2400-0400hrs 25/7/19 Observational Period).

1.3 Subtheme: “Babies at the desk”

The subtheme, “Babies at the desk” describes the way that unsettled or crying infants were taken from the mother’s bedside to the midwife desk area, situated between the

Southern and Northern wards. Here they were cared for by the midwives, sometimes for long periods of time. This was an attempt to prevent the noise of the crying baby from waking other sleeping women. If a woman was unable to care for her baby at the bedside, for example if she was heavily sedated or unable to move easily because of pain from a caesarean section, moving the baby to the desk in its cot was often seen as a solution. Without a partner or support person to care for the baby and with no well-baby nursery in existence, there was no other option available. Safety concerns emerged when women fell asleep with their baby in their arms. Field notes recorded from a night shift observation period indicate:

In both the single and in shared rooms, some women seen falling asleep while holding their babies. (FN 25/7/19, 2400-0400).

During another observation period, a mother of twins in a single room, who had no support person present, was observed asleep with one of her babies on her chest but without the bed rails in place **(FN 17/7/19 1900-2400, Bed 30, 2300hrs)**. This scenario posed a high risk of the baby falling from the bed so I intervened and quietly raised the cot side.

During an overnight observation period, field notes recorded that between 2400-0400, the midwife cared for an infant following a recent caesarean section most of the night, as the infant's mother was nauseated and medicated. The midwife tried to settle the infant and returned the infant to the mother at frequent intervals for breastfeeding. However, the midwife ultimately carried the baby most of the night as the baby was very unsettled and vomiting mucus, and the woman too unwell to look after her baby. At 0300 hours, the field notes recorded:

Bed 26. Midwife walks from room carrying baby. She is looking fed up as she has not had a chance to do anything for other women as baby so unsettled and gagging constantly, and vomiting mucus. (FN 25/7/19, 2400-0400).

The midwife did settle the baby in its cot at the desk where 2 other infants were being cared for but within a few minutes the baby was awake and crying again and the mother was not in a fit state to care for her baby safely.

Jessie and Kate both said how tired they were on the first night following the birth and how grateful they were that the midwife helped by caring for their infants. Kate, who had Matt remain with her in their single room, described how safety was an issue:

“It was later in the night as she was unsettled, and then at one stage the midwife actually took her out for an hour so we could get some rest and then she settled in the bed with me. But again, you know, she could only lie with me as it wasn’t safe in the chair with Will as if he fell asleep in the chair. You know, a couple of times he was sort of sitting there and he was starting to doze off a bit and I said, ‘You’re going to have to put her down because that is not safe’...If there was a safe way for Matt to be able to hold her [baby] and have a bit of sleep, that would have been helpful, but she had to be with me because it wasn’t safe” (Kate).

Similarly, Jessie, who was accommodated in the shared room without her partner, said:

“on the first night one of the midwives came and took her [out to the desk] just so I could get some sleep, and yeah, the midwives were really helpful” (Jessie).

During both night observational periods, midwives were observed to care for infants at the desk. At times, the desk, and the babies located there, were left unattended while midwives cared for other women – a potential safety risk **(FN 27/7/19 2400-0400)**.

Summary

In summary, “Being on guard” demonstrated how the two differing environments within the postnatal ward impacted the women and their ability to rest, recuperate and focus on learning how to breastfeed. Within the shared rooms, women were not in control of their environments. They were isolated from family after visiting hours and did not feel safe in the confined spaces behind the curtains. They did not feel secure or protected within the close proximity of strangers in the 4-bed room. The shared room was not adequate to protect the intimacy of the act of learning how to breastfeed. The sounds of other infants crying, the closeness of other women’s

activities, and the presence of unknown visitors in their rooms intruded on women's sense of comfort. Feeling uncomfortable and unrested impacted on the women's ability to develop competence and confidence in breastfeeding.

In contrast, women accommodated in single rooms experienced a number of advantages to support their breastfeeding. The single rooms had physical barriers to shut out intrusive noise and light, and women could rest whenever they wanted or infant care allowed. The private shower and toilet in the single room facilitated ease of access to facilities needed following birth to cater for a "leaking" postnatal body that might need more frequent washing. Most importantly, the single room is designed to include the supportive presence of a family member to remain throughout the day as well as overnight, to share the care of the baby and to provide a degree of normality. The privacy and confidentiality of the mother and her family were protected within the single room due to the physical boundaries. In a single room with a door which can be closed, women could feel safe from intrusion from strangers or exposure when breastfeeding, expressing, or discussing sensitive issues.

While women in single rooms have a private space to rest and recover from birth, women in shared rooms do not. This in turn affects their hospital stay and their ability to learn and meet the constant demands of breastfeeding and caring for a new baby. In the next chapter the second main theme, "Building a nest" is presented, together with its subthemes of "Space for supporter to stay", "Feeling protected and supported" and "Furnishings to support breastfeeding".

Chapter 5: Study Findings-“Building a nest”

The second main theme, “Building a nest” is presented in this chapter. Together with its subthemes of “Space for a supporter to stay”, “Feeling protected and private” and “Furnishings to support breastfeeding”, this theme describes the responses women were observed to make to the issues raised in the first theme “Being on guard”. In this chapter the terminology changes from a focus on women in transition from being pregnant and giving birth, to a focus on the new mother and what she needs to surround herself with in order to successfully breastfeed her baby.

Theme two: “Building a nest”

“Building a nest” describes the new mother’s need for a supportive, private, unrushed, comfortable space, where she is protected and supported to rest and feed her baby. The term, “Building a nest”, was identified as an analogy for the kinds of support the new mothers identified that they needed. The frequent feeding of a new baby requires a comfortable bed or chair in which the mother can sit to feed safely, while allowing both the mother and infant to experience skin-to-skin contact in close, unimpeded proximity to the breast. Additional furniture and items, such as a glass of water, extra pillows, and soothing music within easy reach of the mother, were identified as being needed to make the environment more comfortable and relaxing and breastfeeding less arduous.

Importantly, new mothers identified not only the need for professional support from midwives, but also practical assistance from partners or other family members to build their “nests”. Family support was described as a form of protection from unnecessary interruptions or demands, assistance for the mother with positioning and mobility needs, and assistance with infant care, such as nappy changing and infant soothing. The presence of a supporter to stay, especially overnight, provided much-needed emotional and physical support to breastfeed and allowed the mothers rest. Having a partner or family members present to protect and advocate for the mothers’ needs removed the feelings of geographical isolation. Image 12 (in Appendix D) was taken in a single room within twelve hours of the woman’s emergency caesarean section. It

shows a new father handing the baby to the first time mother after a nappy change, in readiness for a breastfeed.

“Building a nest” was seen to be achievable in single rooms but was much less likely to occur in shared rooms where supporters could not stay overnight. In shared rooms there was less space available for supporters to stay during the day, and comfortable furnishings were sparse and not accommodating of partner skin-to-skin contact or long visits. Within the combined shared rooms behind thin curtains, it was not possible to protect the mothers from the intrusion of noise, light and strangers.

2.1 Subtheme: Space for supporter to stay

The subtheme, “Space for supporter to stay”, describes the desire for a partner or a support person to remain during the new mother’s postnatal hospital stay. As most mothers “room-in” with their newborns, having a partner or family member present to assist with practical and emotional support was regarded as stress-reducing. The added emotional and physical support a partner or family member can bring to the mother also provided a normalising influence, while ensuring shared bonding with and celebration of the new arrival.

For example, Mary remained in a shared room for nine days, as her small baby was jaundiced and she required extra support with breastfeeding. Mary said:

“I was prepared that my partner couldn’t stay as I have a little one at home. I would have liked it if he could have, though” (Mary).

Mary added when asked if there was anything more she would like to say at the conclusion of her interview:

...“a more comfortable nurturing environment to sort of encourage, and make it a bit more enjoyable, because it is hard. It’s not easy breastfeeding” (Mary).

New mothers recognised the importance of both the professional medical and midwifery team's expertise, but without the normalising influence and support of a partner or support person, some left hospital before they were confident with breastfeeding. Hayley, who was in a shared room for one night following a 1.5 litre postpartum hemorrhage, said:

"I felt safe, very much. There were always nurses [midwives] popping their heads in checking [when in delivery suite and postnatal ward]" (Hayley).

However, her partner Shane, who had remained with her overnight in labour ward, could not stay once Hayley was transferred to the shared postnatal room. So, Hayley ultimately decided to go home.

Following an emergency caesarean section, Jane, who was in a shared room, stated:

"It's good being here with my [caesarean] scar, as I'm feeling really weak in my core and they've [midwives] been really good and helping me with my breastfeeds. The only thing that has been difficult is, I did have a catheter in for 24 hours and that was hard. So it was lucky Sean [partner] was here" (Jane).

During the interviews, women were asked to rate the importance of having their partners present. As discussed in the methods chapter I wanted to pinpoint how important it was for women to have a partner or family member remain and asked partners to quantify "On a scale of 0-5, how important is it that you remain together in hospital?"

Nari and Cheryl, who were both flown in from rural areas with premature infants admitted to the Neonatal Intensive Care Unit (NICU), emphasised the need for emotional support from their partners. Nari rated the importance of her partner being with her by stating:

"I would say a score of 10/5 [indicating an extremely high score] as in our situation it was very traumatic and your baby needs both of you there and we need the support of each other" (Nari).

Nari was transferred into a shared room following a premature emergency caesarean section (for preeclampsia), after being airlifted into the hospital from an outlying area without her partner. She was extremely stressed without her partner's presence while he was in transit from their home, 400 km away. Nari described her birth experience and said in a worried tone:

"It started off as a normal day and it was a race to surgery. It was really hard having to leave the baby and honestly, I couldn't get up there [NICU]. I spent 5 minutes with her when she was born, and I couldn't get out of bed or anything and they wheeled the bed to me so I could see her and then I didn't see her again till the next day...It's different for me as I don't have to ask, 'Can you hold my baby while I have a shower?' but I needed more staff in the beginning, especially straight after the anaesthesia, as I needed help to get myself up and there was an instance when I had 3 massive lumps of blood...It was quite a lot but I'm still alive...Bed-wise because you can lift it up and being able to lean it forward is helpful. A double bed would be good as at least you've got someone there who can help me lift up or go to the bathroom....tomorrow will be a challenge with my partner here, and I'm not sure where he will stay" (Nari).

Cheryl, who remained in a single room for 8 days while her premature baby was in NICU, said at the follow-up interview, following discharge from hospital:

"I felt the time I stayed in hospital was adequate. The private room was really good as I could have my partner stay, [I rate it as] 5/5 in importance. Regarding care, it was the same. Midwives were really good and helped but I could rest and have my partner with me... [in the single room]. It is important for a partner to be able to remain overnight. We are rural and he was able to stay here overnight. As our baby is in NICU we both want to see him and be close" (Cheryl).

Kate and Matt experienced both the shared room and the single room, and Kate said of Matt's presence:

“I 100% needed him [Matt], as I wasn’t able to change a nappy, as every time I stood up I felt light-headed, and I needed him to help me [breast] feed ...if you were waiting on the midwives to come in when I needed to feed her [the baby] or check her it would be hard on us and hard on them. Having, you know, room for someone to stay with you does help them [midwives] too. And even just getting water during the night you know when you are feeding, I was SO [Kate’s emphasis] thirsty and I would have been calling them constantly, ‘Can I have more water? Can I have more water?’” (Kate).

Kate’s experience illustrates how much support for breastfeeding a family member can provide if they are accommodated in the woman’s room. At the follow-up interview Kate said:

“It was definitely important that they [partner and baby’s grandmothers] stayed. I couldn’t get out of bed and when I had to feed my baby, for me to get her and get back into bed would have been really difficult. I lost a lot of blood and I had to have an iron transfusion and every time I stood up, I felt very light-headed and would have had to have called the midwife every 2 hours if they were not there. They [family members] were able to change her and help me care for her” (Kate).

Helen had little recall of the first few days in hospital saying, *“The first night was a bit of a blur”* (Helen). Her partner, Harry, who remained throughout the hospital stay because Helen was having seizures and medications to prevent fitting, said:

“I stayed all the time, as firstly there was the emergency C/S and instead of having to go home I didn’t have to worry all the time or till the morning. I could be there and help which was good...She could not do anything and with the first baby trying to breastfeed she was very stressed out” (Harry).

Similar comments were made by other women and their partners in relation to the importance of having help in the first postnatal days. Initially, Liz was allocated a shared room where she stayed overnight and where her partner, Peter, could not stay. She was transferred to a single room the next day on the basis of clinical need.

Liz rated the single room highly because her partner could stay to provide help:

"I reckon it's like 4-5/5, yes, like if I need help, like right now he's [partner Peter] there to do it. Like if I have to wait for a buzzer and wait my turn sort of thing. Like I got up and I started to bleed a bit and I called the buzzer and had to wait for someone to come. If he's here he could have easily helped wipe me or make sure everything is OK. Like you start sort of freaking out like thinking, 'Oh God! What's happening?' and it's quite frightening" (Liz).

Peter commented on their first night at the hospital:

"The first night we were here, and it was pretty late and the issues of bleeding, I was going to stay but the whole rules department and hours of stay." Liz interjected, "It's hard," and Peter continued, "I know there's nurses [midwives] around, but fathers should be able to stay in comfort as well". (Peter)

In single rooms, tired partners could sleep on the fold-out armchair (as shown in Image 13 & 14). However, tired partners in the shared rooms sometimes resorted to lying on the floor to sleep for short periods. Following Jane's emergency caesarean section, Sean, who had been up all night and had not gone home, slept beside Jane's bed on the floor during the afternoon rest period. He was helping care for the baby as Jane was still recovering from her caesarean section and did not want to leave. Sean revealed, *"I did lie on the floor"*. After confirming with Sean that he slept in the shared room, the interviewer asked if he was given any bedding. Sean pointed to a storage area and said:

"There was stuff there, so I just grabbed a pillow and lay down there", pointing to the floor, between the bed and the chair he is sitting on, when being interviewed (demonstrated in Images 8 and 9). Sean remained helping Jane for the entire next day following labour and the emergency caesarean section, leaving only when visiting hours ended. The midwife described to the researcher how Sean had almost caused an accident while lying on the floor due to the lack of visibility, behind the closed curtain. **(FN Sun. 21/7/19 1100-1500hrs).**

Fathers appeared more relaxed and at home within the single rooms. During an observation period a couple were noted to be enjoying their private space after their baby had been brought from NICU to the ward for the first time. Field notes record a normalising experience:

1345hrs, Bed 5. Mother and father sitting on bed close together. Baby has now been brought down from NICU by father and remains wrapped in cot beside mother's bed. This baby is having a few suck feeds. 1400hrs, Bed 5. Both parents lie on bed snuggling. Baby remains wrapped in cot. (FN Sunday 21/7/19. 1100hrs- 1500hrs).

While couples could share time with their babies without being intruded upon in the single rooms, some fathers within the shared rooms appeared to feel embarrassed or unwelcome when entering the 4-bed room.

During an observation period, one first-time teenage father shyly said to me, *"I am just the father,"* when entering the shared room where his partner was surrounded by curtains. He appeared uncomfortable and unsure of himself. This father had the previous evening spent considerable time trying to bottle-feed their baby who had been diagnosed as small for gestational age. He was able to contribute valuable information to the midwife, thus impacting positively on the baby's care **(FN July 30. 0800-1200 at 0950hrs).**

2.2 Subtheme: "Feeling protected and private"

In the subtheme, "Feeling protected and private", women described the kind of environment that would enhance their ability to learn how to breastfeed in comfort and with confidence. The women said they needed the ability to rest and recover from birth while establishing breastfeeding in a safe, protected, private, quiet, comfortable space where they were adequately supported.

The decision about whether women were accommodated in a single or shared room depended on a number of factors. Ward managers made bed allocation decisions with priority given to those most in need from the clinical perspective. Single rooms were allocated to women giving birth to twins or triplets, as the extra space accommodated

more than one cot and enabled both the mother and her supporter(s) to be accommodated while learning to care for multiple infants. The large armchair, as demonstrated in Images 11, 13 and 14, (Appendix D) makes it easier for the mother to breastfeed more than one infant, while the armchair doubles as a fold-out bed to allow a support person to remain overnight. Priority is also given to women with infections, those who are immune-compromised and require isolation, and mothers with sick or premature infants. For example, one study participant (Cheryl), who was flown in from a rural hospital with a premature infant requiring neonatal intensive care. **(FN Sun. 21/7/19 1100-1500hrs).**

Mothers with private health insurance, such as Kate (and her partner Matt), may be allocated a single room if one is available. Kate said:

“My Mum asked, and we had private medical insurance and it was last night...it had been a big day and there were kids running around and I think if I’d been in that shared room where those kids were...here (single room) I’ve been able to shut the door and get a bit of sleep”. Partner states, *“She [baby] wasn’t settling very well, and I reckon we would’ve been stressed”* [in the shared room] (Kate and Matt).

Without being able to pay for or being allocated a single room many women in 4-bed wards tried to create a private space behind curtains and used their technology with family and friends outside visiting hours for emotional support. During the day, the ward routine was focused on meeting the needs of the busy hospital schedule. Observations revealed that women were interrupted despite their own needs for rest or when breastfeeding, to meet the hospital requirements. Meals were delivered at regular times, trays were collected, and menus needed to be filled in and collected by the clock.

Women within shared rooms were observed to keep their curtains closed for long periods of time for privacy. However, ventilation was affected, and the rooms could become stuffy as the windows were locked. Women in most single rooms have the

option of a door to open or close. Within the shared ward, when the curtains were closed the women complained of the cubicles being hot and lacking air flow.

When the curtains were open, ventilation was improved, but due to privacy concerns many women did not open the curtains. When enclosed behind the curtains, especially when the numbers of people in the room increased, the poor ventilation made the room hot and uncomfortable, which impacted on the ability to breastfeed. The women did not feel protected and their inability to alter something as simple and necessary as access to air and light was a reminder to women that they were in a foreign space where they were not in control.

Jessie, when describing the shared room, said,

“To have everyone in the same room and the curtains dividing the room, privacy, like you could hear every one and the stories and what was happening with them so there was not privacy there”.

Allied health professionals such as those from the State-wide Infant Hearing Screening Service, and physiotherapists, performed checks on the newborns, prior to discharge home. In addition to caring for the new mothers and babies, midwives were required to perform mandatory and routine tasks, (unless parent’s refused to give consent) such as the Newborn bloodspot screening, give immunisations such as Measles, Mumps and Rubella (MMR), Hepatitis B, Anti D, admit women and infants from the birthing suite, and prepare women for discharge, which included arranging home visits, giving discharge information and checking babies.

The short hospital stay with time constraints to have mandatory (requiring the woman’s informed consent) and routine tasks performed, prior to women being discharged home added to the busy-ness, and chaotic milieu of the postnatal ward. Women were constantly being interrupted when trying to rest or breastfeed which led to stress. Women did not want to add any extra burden onto the midwives, whom they recognised were busy, and without a partner or family member present to help, may have led to delays in seeking or receiving assistance. This was more apparent for women in shared accommodation, but even impacted women in single rooms as they

were not entirely immune from the noise and chaos. Rather than feeling protected and nurtured to rest and recover from the birth of their infant women described and observation field notes and reflection record:

0915hrs, Corridor busy and difficult to keep track of with all the to-ing, and fro-ing of different people in corridor and rooms. Differing staff – cleaner, kitchen staff, menu collector, medical team, hearing screener, physio, midwives – all wanting to see the women within this short space of time. (Observation FN 0800-1200. Tuesday July 30, 2019).

Liz described what it was like being within both the shared room:

“It’s noisy but you’re in the noisiest part I reckon so I don’t feel as bad if she cries as there’s other babies and it’s pretty normal, I reckon”: and when describing the single room said: “I suppose you can close the door and you’ve got a bit more privacy and the toilets just here other than that you get the same amount of attention from the staff, it’s a bit more private” (Liz).

During the same observation period, field notes described how a busy midwife stopped what she was doing in one single room to answer the bell in another single room. The woman was very unwell. She was dependent on the midwife to help her breastfeed and care for her infant. The sick woman had to wait with her crying infant until her midwife had completed the medication round before she could help the mother breastfeed, as the ward was too busy for another midwife to step in:

0825hrs Bed 2. Midwife enters room with medications for mother. She has been on Endone and is constipated. Discusses with midwife and overheard by observer. Bed 1. Bell rings and light goes on above door. Midwife attends mother, letting her know she is with bed 2 and will be there shortly. (Observation FN 0800-1200. Tuesday July 30, 2019).

Many women regarded the assistance of a support person as a way of reducing the burden on midwifery staff. This example from the field notes describes an observation of the activities of parents in a single room that illustrates the benefits to the staff of having a family member/supporter stay overnight:

Light now on, partner enters room. Partner leaves room to collect expressed breast milk and seeks midwife to sign out of ward shared EBM refrigerator in preparation of NICU visit. Mother re-enters room following NICU visit in night clothes and slippers, telling researcher that baby has just had a successful breastfeed and she is very, happy. Mother re-enters single room, closing door and drawing curtain which covered window in door, closing out corridor light. Mother sleeps. (Images 1 and 10). FN 1500-1900 Friday 5/7/19

Observational period.

Reflection from the observation period notes for Friday 5/7/19 described how this woman's partner had accompanied her to NICU where they had remained together. He relieved the staff and supported his wife to visit their baby in NICU and then allowed her to focus on the tasks only she could do. He performed other tasks such as checking of expressed breast milk in and out of the locked milk refrigerator, which requires midwives' signatures to prevent mix-ups of milk. He also cleaned up and sterilised the breast pump equipment which relieved the midwives and ensured his wife got back to bed to rest:

Father goes to sink in old night nursery to wash up breast pump equipment, thereby not only providing emotional and physical support with NICU visit, but physical support for wife to rest. (FN 1500-1900, Friday 5/7/2019).

When asked what it would have meant for her if her husband could have stayed during the hospital stay, Mary expanded, saying:

"It would be great, and probably they'd be able to help the staff as they'd be able to take the pressure off and help with the little things so they can actually do what they are supposed to do instead of go and clean bottles or if you can't get out of bed after a c section. To have a family member who could just help with changing the nappies or going to get you a drink of water or something, it would take the burden off the staff" (Mary).

Within the single rooms, women had more privacy, and staff were able to interact with the families without being overheard. Confidentiality could be maintained, allowing

improved history-taking as women were not inhibited through fear of being overheard.

When interviewed, Mary said she had not been offered an alternative to her bedside space when being interviewed:

“Sometimes you do want your business kept quiet...the midwives do try and keep their voices down but they can’t. You’ve just got to hear, you know”
(Mary).

Within the shared rooms, women had little control over their environments. They could not adjust the lighting to rest when they wanted. Within the single rooms, women had the ability to adjust the lighting or ventilation as they required. Natural light was preferred to the artificial bright lighting provided by overhead ward and adjacent corridor lighting, as seen in Appendix D, Images 1, 2, 3, 4 and 5. It was noted throughout the observational periods that women requested the main lights within the shared room to be turned off. The central corridor lighting, which remained on until the night shift commenced, could be blocked out in single rooms by closing the door and screening the windows. However, this was not the case in the shared rooms and the two single rooms without doors. Frosting on the windows (see Appendix D, Images 1, 2 and 3) between the rooms and the corridor wall was inadequate to block out the light within the shared rooms, and this prevent women from resting.

Field notes described how when the ward was not fully occupied, the women adjusted the shared room curtains to reduce brightness and increase airflow:

Despite corridor light being on and bright, the 4-bed room has natural lighting [coming from windows] and seems quiet, spacious, airy and calm. Perhaps it is because Bed 10 is empty and only 2 mothers and babies are in the room due to the woman in bed 12’s baby being in NICU where mother remains throughout the observation period. With curtains of empty beds being open, the feeling of congestion and lack of airflow no longer exists as when room is full and curtains all closed. (FN Tuesday July 30, 2019 0800-1200).

During another observation and reflection period when the shared room was half-full,

field notes described how the visitors spread out into other cubicles, and women were relaxed and more comfortable due to the spaciousness of the ward. The field notes show that at 1130:

Room 4 and 5 remain empty as parents elsewhere. ? in NICU. Bed 6. Grandmother of baby from bed 9 sitting in spare chair in Bed 6. Lots of room to move as curtains open. Bed 7. Midwife doing baby care with parents and organising feeding on a 3-hourly breastfeed top up protocol. Bed 8 empty. Bed 9. Father continues to sit in chair with grandparents who are spreading out as there is space. Room has a feeling of air and light and calm. (FN Sunday 21/7/19. 1100hrs to 1500hrs).

When a partner or family member could remain to support the new mother with baby care, she could concentrate on the “mother-exclusive” tasks, such as breastfeeding, expressing and self-care. Mothers were seen through the observation periods, in both the single and shared rooms, breastfeeding after partners or grandparents had readied their babies for a feed by changing nappies (Appendix D, Image 12); or settling the infants after a feed, if mothers were required to express or wanted to rest (Appendix D, Image 8). During visiting hours, partners and grandparents were often seen walking the corridors trying to settle infants, thereby supporting the mother’s rest and recovery. Image 17 (Appendix D) shows grandparents caring for their grandchild outside the shared ward while their daughter-in-law slept.

During the afternoon observation period, a woman’s partner and her baby’s grandparents were seen helping her care for the baby and breastfeed. The mother was extremely embarrassed by urinary incontinence which had occurred in the shared room and while walking to the toilets in the main corridor. She was helped by the physiotherapist, who could be overheard discussing her incontinence issues through the curtains by the observer, other women, and their visitors. She was also protected and supported by her family members to rest. Her husband stood outside her curtained off area to prevent anyone entering while she slept while the grandparents settled and sat with the baby in the common room (Appendix D, Image 18).

Afternoon rest period. 1445. Bed 17. Father and grandparents in room changing baby who is crying. Bedside light on. Mother breast feeds. 1500, Bed

17. Mother sitting on bed alone trying to breastfeed. Then supported by Lactation Consultant and midwife who is helping mother to breastfeed. Mother having incontinence of urine issues and midwife seeks physio support. Physio enters room, and curtains inadequate to protect privacy and confidentiality when discussing incontinence issues of woman who was extremely embarrassed. Mother walked to toilet in corridor following physio interview...1520 Bed 17. Partner and grandparents took baby. Mother washed hands in corridor basin and disposed of rubbish in bin under basin. Mother has been unable to stop baby from crying and grandparents took baby for a walk. Baby settled. Grandmother and grandfather shared the baby care walking the corridors and then sitting with baby in common room, while mother eventually slept. (FN 5/7/2019 1500-1900 Bed 17 1700hrs).

Jessie and Cameron commented on the dichotomy of simultaneously needing their family and needing a rest:

“Yeah, we’ve had a few visitors. People have come, like the grandparents have come and it is good, and it is exciting for them to come and see, but it is hard as you have potentially four other families and it is their first grandchild so it can be pretty hectic” (Cameron).

Nari was expressing breastmilk for her infant and taking the milk to NICU to tube-feed her baby. When asked if her privacy and confidentiality had been maintained in the shared room, she said:

“No, not at all...A little bit more space and privacy would be good. Especially with the babies as the mothers just get theirs settled and then another wakes, and they set each other off.” (Nari).

Nari described the advantages of having skin-to-skin time with her baby in a private space in NICU, illustrating the emotional and physical benefits of a quiet private space for interacting

with her baby:

“The last 2 days when I’ve been up there [NICU], having a quiet kangaroo time, we’re both quiet and we’ve nodded off”. Interviewer says, “That sounds good”, and Nari agrees. “It’s just so relaxed when you finally get to hold them. It’s the wonderful hormones...Yes, the last hour and a half we’ve just been cuddling, and I feel so much better after that” (Nari).

Privacy and confidentiality were protected and enhanced within the single rooms. Parents could have skin-to-skin with their infants in privacy without being embarrassed. All the women said confidentiality was maintained within the single rooms, while all mothers in the shared rooms said there was no confidentiality. Where there was more room and privacy in the single rooms, as illustrated in Appendix D, Images 12 and 14, fathers were seen lying on the fold-out chair holding their babies with skin-to-skin contact. This was not possible in shared rooms due to the lack of comfortable furnishings or guaranteed privacy.

2.3 Subtheme: Furnishings to support breastfeeding.

The final subtheme within “Building a nest” is that of, “Furnishings to support breastfeeding”. Within the postnatal ward, there were few comfortable places for mothers to take their infants if unsettled, or for partners or family members to remain to provide infant care while mothers were resting. Other than the common room, there are few comfortable family or mother-friendly spaces inside the postnatal ward. The common room is a multi-purpose space and used for education sessions, baby resuscitation and baby checks, as seen in Appendix D, Images 15, 16 and 17,

There is a small kitchen which caters for a 32 bed ward population and provides an ice-making machine, microwave, sink, refrigeration for milk and bread, and boiling water with tea and toast-making facilities, but there is no provision for comfortable sitting or dining facilities. Consuming food and beverages has to occur at the bedside or outside the ward within the hospital corridor or commercial outlets, which were not open overnight. Some partners and family were seen to bring home-cooked food which could be warmed in the kitchen microwave or stored in the communal refrigerator which was often full and not secure. Some mothers left the ward to visit the hospital cafes and cafeteria. Cheryl, who remained in a single room, said:

“It is quite pleasant here. When family comes and once my partner comes, I plan on going to the canteen for coffee and that will be nice” (Cheryl).

Meals were delivered between 8am and 5pm and a light supper at around 7pm, leaving a long period without food for breastfeeding women who often say they are hungry. Tea and toast was available in the small kitchen but limited spare meals or sandwiches, and women were seen to go hungry. Kitchen staff removed the meal trays within a regulated time after delivering them. If a mother was in NICU or out of the ward she might miss her meal. During an observation period, at 1130 in the morning, the mother of triplets was observed saying to the midwife that she was hungry:

Bed 4. Mother returns from NICU. Requests analgesia from midwife who is in corridor as she passes. Pulls curtain across doorway for privacy as no door on room 4, and mother goes into room to express with pump. She tells midwife

she is hungry and has returned to ward for lunch. The midwife supplies the mother with an orange to tide her over. (FN Sun. 21/7/19. Ward Observation 1100hrs to 1500hrs).

For those families who wish to celebrate the birth of a baby and nurture the mother, space is limited in shared rooms. In single rooms, although space was tight, there was room for flowers, gifts and cards. This was not easily facilitated in the shared rooms, which had minimal space that quickly became cluttered, as revealed in Appendix D, Images 6 and 8. Having no place for visitors to go, other than the bedside, meant other women in the shared rooms were intruded upon while trying to rest. This was an issue for Mary, who thought visitor numbers should be limited, saying:

“Sometimes there are too many people coming in. I think there should be a minimum [sic: maximum] of visitors...When I was in one of the other rooms there were maybe 7 visitors all at one time and...they interrupted my sleep and woke me up and they weren't quiet or there was no consideration for anyone else in the room either. Yes, I think there should be a limit unless they have got their own room or can shut the door to minimise the effect” (Mary)

In describing the impact of visitors, Kath who experienced both the single and shared rooms, discussed the lack of chairs and the need to limit visitors in the shared room:

“In the single room with visitors my Mum would come, and sit in that chair (Appendix D, Image 11), but I would only have one visitor at a time in the shared room... I didn't want other women to be bombarded” (Kath).

Space around the shared rooms is small and cannot accommodate a fold-out armchair/bed, as evidenced in Images 4 – 8 (Appendix D). The chairs in the shared wards are standard chairs designed to fit the space (see Image 9) and are not designed to support prolonged stays; nor are they safe or comfortable to sit in to carry out skin-to-skin contact with their infant.

As there is no public toilet on the postnatal ward, partners of women in shared rooms, and other children, visitors with mobility issues or grandparents who are visiting the new mother and baby, are not catered for. Without facilities which welcome family members who are supporting the new mothers, the family members could not remain for long. Mothers were worried by being away from their other children and stressed that siblings may feel jealous. Without a family-friendly environment they did not want to remain in hospital, as field notes recorded:

Family and visitor facilities. There are no public toilets in ward. A visitor approached researcher to request directions for a child who was visiting his mother and new sibling. Nearest public toilet outside the ward some distance away. No area for families to eat except in cafes some distance from ward. Families who try to support mothers to rest and babysit can use common room [Appendix D, Images 15, 16 and 17] but it is also houses storage of cots and breast pumps, sinks, for cleaning and refrigeration for breast milk. Scales and resuscitaire for baby checks makes it more like a storeroom than a family-friendly space. Very public and thoroughfare for lactation office and interview room. Not inviting despite chairs and a TV. (FN Observation period 1500-1900 Friday 5/7/20).

During a morning observation period, two families arrived to visit a mother at the same time and apart from the mother's bedside within the shared room, there was nowhere to go as the ward was busy. The field notes at 0925 hours record:

Eight visitors come through glass corridor doors including children and older visitors. ? grandparents. They enter room 14-17 and then another lady visitor arrives with pink balloons. Visitors are apologetic as they are all family but did not know each were coming at same time and a total accident that they arrived together. (FN Tuesday July 30, 2019 0800-1200).

At 1005 Field notes also record:

Grandma and visitor chase a small child who is running down corridor and take back to mother's bedside. Grandparents leave Bed 14 [shared room], saying goodbye to toddler cheerfully....Child escapes from Bed 14 and runs down corridor pursued by father while mother watches from doorway of 14 holding new baby, and talking with midwives about sibling rivalry as father scoops child up, and holds in arms. (FN Tuesday July 30, 2019 0800-1200).

Women experiencing differing modes of birth required different facilities and furniture in order to find a comfortable place to breastfeed. What was comfortable for one was inappropriate for another. For example, Liz, who had birthed vaginally, had experienced a 4th degree tear and reported she could not sit down, saying:

"I got a bit of sleep last night but before that I was just in too much pain. I can't really sit down for too long, but it's comfy here in the bed" (Liz).

Similarly, Kath, who had an instrumental vaginal birth, said:

"I sat on it only once [a large armchair as shown in Image 11...] I probably found it easier [to breastfeed] on the bed because I could control the height on the back of the bed" (Kath).

Three women who had experienced caesarean sections shared similar thoughts about managing their painful wounds when trying to find a comfortable space and position in which to breastfeed. Helen said:

"I could not get out of bed in the beginning because of the cut, but it was easier to feed in the chair" (Helen).

Mary reflected:

"I did not breastfeed in the bed, not comfortable. I feed in the chair...A more comfortable chair to feed in would be good... I feed in the chair beside the bed, as the bed is inadequate" (Mary).

Jane focused more on the feeling of having to protect her abdominal wound from being bumped by furniture or other people in a cramped space, as she reflected:

"It [the room] could do with being a metre wider, as [the space is] tight, especially when I've got a sensitive belly and when you've got the crib open and beside you" (Jane).

Summary

"Being on Guard", in shared rooms in theme one meant women were anxious and stressed behind curtains with three other mothers and their infants due to noise, fatigue and lack of family support overnight which is counterproductive when breastfeeding. The cramped spaces within the cubicles within the shared room inhibited family support which is essential for successful breastfeeding outcomes. The opposite was true for women in single rooms. Theme Two demonstrated how women and their partners were enabled to get on with "Building a Nest" to care for their infant and support breastfeeding in privacy and comfort as a family unit. In a single room with an en suite and comfortable furnishings, a partner or support person could remain to ensure the new mother felt both protected during her hospital recovery period and supported to breastfeed.

In summary, women who remained in shared hospital rooms during the postnatal period were dissatisfied with the hospital environment, saying that the postnatal hospital environment needed updating as it did not meet the needs of new families or mothers learning to breastfeeding. Although respecting the professional and medical support services, families recognised that more could be done to improve the experiences of postnatal parents and families. Many couples expressed a desire for a more nurturing homely space with comfortable practical facilities. In particular, participants in this study expressed a preference for being accommodated in single rooms where

partners and family members could remain throughout the day and overnight to help. Another expressed need was for a common space, such as a lounge or dining room, where women and their visitors could gather, away from the shared room where some mothers might be trying to rest. The lack of privacy in the shared rooms, and the need to move across the public corridor to go to the bathroom, was a major concern for some first-time mothers. The constant feeling of having to be on guard to protect themselves from perceived invasion of privacy was spoken about by many study participants, and the lack of confidentiality was noted by all women within the shared ward.

These findings and their implications are discussed in the following final discussion chapter.

Chapter 6: Discussion

In this chapter I discuss the two major themes, “Being on guard” and “Building a nest”, that arose from this ethnographic study, focusing on how the postnatal hospital environment impacted on the breastfeeding experience of women. I reflect on these themes in relation to the extant literature and in terms of how the insights gained from this study may contribute to future health facility design.

The setting for this ethnographic study was a 32-bed postnatal ward that houses 28 postnatal women and their infants and 4 antenatal women. Most women (75%) were located in 4-bed rooms, with shared bathroom facilities located in a corridor outside the rooms (Appendix D, Images 1, 2, 3, 4 5 & 6). Eight women and their babies (25%) were accommodated in single rooms with attached, or en suite, bathrooms (Image 3.1, and Appendix D, Image 10). The focus of the study was on how women were supported to achieve their breastfeeding goals in these two different kinds of postnatal hospital rooms.

The themes revealed the two postnatal environments were in direct contrast to one another in enabling and supporting breastfeeding. Theme one, “Being on guard”, arose from the observations and words of women who were unable to experience the level of privacy and rest required while learning to breastfeed and care for their baby during the hospital stay. The women felt inhibited and unsafe while getting to know their baby’s feeding cues and breastfeeding needs due to a profound lack of privacy to practice essential breastfeeding behaviours, in particular naked skin-to-skin feeding. In contrast, the single rooms provided an opportunity for couples to engage in “Building a nest”. In this comfortable private space, the mother and her partner felt safe and supported to breastfeed and share parenting activities that enabled the mother to rest. Mothers in the 4-bed shared space also endeavoured to build a nest by closing the curtains around their bed. This provided an element of visual privacy but left them feeling vulnerable to having their space invaded at any time. As most women had access to mobile telephones or computers with an internet service the need to interact with other women within the room was not apparent, as they used their technology and curtains remained mostly drawn during

the observation periods.

6.1 Overview of Theme One, “Being on Guard”

“Being on guard” described how the shared 4-bed rooms failed to meet the basic needs of breastfeeding women. Following labour and birth, women are tired and need to rest in a private, quiet space with adequate support in which to recover while adjusting to their new role caring for an infant and learning to breastfeed. Shared rooms failed to meet the breastfeeding needs of women and babies as curtains did not protect the women’s privacy or confidentiality; nor did they protect women from light or noise, to allow rest. Women were fearful of being overheard or exposed due to the close proximity of other mothers, babies and their visitors. Curtains could be dragged open at any time, accidentally or on purpose, and breastfeeding women were constantly in a state of high alert in case this should happen.

High levels of stress are counterproductive when breastfeeding, as stress hormones are released and the fight, flight or freeze response inhibits the release of oxytocin that is directly responsible for the “let down” or milk ejection reflex (Wahyuni & Aji 2021; Dewey 2001; Mohrbacher & Kendall-Tackett 2010). Following the expulsion of the placenta hormones are released which directly control breastmilk production. Their production and release are facilitated by keeping the mother and baby together in safe and comfortable surroundings. Breastmilk production and release can be disrupted by underlying factors, such as maternal stress induced by being located in a strange place amongst strangers, separated from family, experiencing pain, or feeling a lack of control. All these factors contribute to the mother’s mental and physical state (Kathleen Kendall-Tackett 2011; Kendall-Tackett, Cong & Hale 2015). Women with a history of post-traumatic distress, which may be the result of an unexpected birthing issue or a history of physical or emotional abuse, are particularly vulnerable to stress-induced disruption to breastfeeding (Kendall-Tackett, Cong & Hale 2015; Strathearn 2011).

6.1.1 Subtheme one: “You just feel the noise”

The first subtheme of “You just feel the noise” revealed women in shared rooms were exposed to constant noise and could not rest. The lack of soundproofing and the close proximity of the neighbouring beds enclosed by curtains to separate the four cubicles

contributed to constant noise. Short hospital stays and the high turnover of mothers and babies resulted in high levels of activity and associated noise. This type of activity has been described in the nursing literature as “churn”, and there is robust evidence of its negative impact on patient wellbeing and clinical outcomes (Duffield, Gardner & Catling-Paull 2008; Lawal 2020). A Swiss study of postnatal women and babies sharing 2-bed rooms called for more research into the effect of the hospital ward environment on postnatal women (Kurth et al. 2010). This study found that tiredness following childbirth was described by women as both physical and emotional tiredness (Kurth et al. 2010). Physical tiredness was attributed to sleep deprivation. The study revealed that the restoration of women’s strength was hampered. The cause of this was not only their babies’ needs impacting on the woman’s need for sleep, but also the presence and voices of staff caring for the women/babies and the activity/sounds of other women within the room. Sleep in shared rooms was often disrupted (Kurth et al. 2010). These findings concur with my study findings. At night, the lack of family support for the majority of women housed in shared rooms negatively impacted their ability to rest and negatively impacted their breastfeeding experience. The constant sounds of bells ringing, bright lights permeating the curtains, and other infants crying meant women were often disturbed and subsequently sleep deprived and emotionally stressed.

Furthermore, I observed the mandatory/routine components required of tasks needing to be completed prior to hospital discharge contributed to the busyness of the environment where the focus was on the risk-management needs of the institution rather than the breastfeeding and mothering support needs. A study of women’s experiences in hospital revealed that women learning to breastfeed needed support from professionals with time to remain with the mother for education and to encourage breastfeeding success (Sheehan, Schmied & Barclay 2009). The average three-day hospital stay provided little time for the staff to spend with the women for education, and little time for women to rest and recover from birth while simultaneously learning to breastfeed and care for their babies. Breastfeeding is an integral component of maternity care and it is not sufficient to help the woman birth and send her home ill prepared for breastfeeding after a short hospital stay and

expect her to manage. Breastfeeding takes at least several weeks for mothers to master. In my clinical work, I support them by using the analogy of dancing or tennis, breastfeeding is not a natural skill and a learned behavior. The mother needs time and may need some lessons. As the literature reveals, dissatisfaction with postnatal care has been ongoing for decades (Adatia, Law & Haggerty 2014; Beake, McCourt & Bick 2005; Beake et al. 2010; McLachlan et al. 2008; Rayner et al. 2008; Vogel 1998; Wray 2011, 2012, Zadoroznyj 2015).

Rest for women was very important in the current study, as was woman having their own visitors and support people. In a study of the perspectives of midwives providing hospital postnatal care in Victoria, Australia, midwives' agreed that long visiting hours impacted on women's ability to rest (Rayner et al. 2008). When asked how they would envisage postnatal care in an ideal world, the midwives asked for more comfort and privacy for the women in rooms housing no more than two mothers and infants (Rayner et al. 2008). In another Victorian survey of 66 hospitals where visiting hours varied widely, the tension between enabling adequate rest for women while simultaneously wanting to be with family and friends, was well described (McLachlan et al. 2008). The dichotomy of women wanting their own families to visit, but having little tolerance for other women's visitors, has been demonstrated in many studies (Wray 2012; Rayner 2010).

A peer reviewed report into noise within a postnatal ward in the USA argued that managers should be responsible for patient wellbeing by checking that noise levels do not exceed the recommendations set by the World Health Organization of 30-40 decibels (Adatia, Law & Haggerty 2014). In my study, the lack of soundproofing and the close proximity of other women and their babies in the shared rooms meant women were awakened at night by sounds through the curtains. Women said the noise was amplified during the night due to the lack of sound-absorbing floor coverings and their sleep was disrupted by the amount of light, noise and activity around them. It was also apparent that during the day women could not rest as the ward was busy with high levels of activity and noise due to the high volume of staff and visitors moving in and out of the shared space.

A survey of 64 postnatal women in the USA found there was no significant difference

in women's ability to rest or bond with their baby after a quiet time intervention of two hours was introduced into the postnatal ward in the afternoons (Waller-Wise 2019). The only significant difference was a reduced number of interruptions faced by the women during the period of 'quiet-time' (Waller-Wise 2019). In my study I observed, and women reported, that they were averaging three to four hours sleep within a twenty-four-hour period due to their babies' needs and the uncomfortable, unsupportive environment. All mothers reported they were tired which is normal due to the baby's feeding needs. However, between feeds when it was possible to rest, women were constantly disturbed.

There are many studies which report on the negative health implications of lack of sleep in new mothers (Adatia, Law & Haggerty 2014; Kurth et al. 2010; Lai et al. 2015). In focus groups of nine women and five midwives examining the design factors which affected recovery and well-being, one woman said of the postnatal period:

"a very vulnerable and private time which involved emotional, physical and psychological occurrences that needed a quiet time and a comfortable environment to be with partners and family members" (Lawal 2020, p. 263).

Studies of the noise in the shared postnatal ward environment impacting women's ability to rest have been commented upon for decades (Filshie et al. 1981; Vogel & Mitchell, 1998). International studies have reported that women are less disturbed by their infant than by conditions within the hospital environment such as light and noise, visitors, hospital admissions and discharges, impacting women's ability to rest (Waldenstrom & Swenson, 1991). A quantitative Norwegian study concluded that women did not get adequate rest and the factor most strongly associated with lack of sleep and rest was not having a single room (Eberhard-Gran et al. 2000).

My observations revealed that during visiting hours, the partners of women in the shared rooms or other family members held the babies in their arms for hours or, if the babies were unsettled, walked the corridors to soothe them, thus allowing the new mother to rest and not disturb the other women. Following visiting hours, without partners or family to cuddle or settle them, the babies' crying increased. Mothers were distressed by the other crying babies and said in interviews they would

just manage to get their baby to sleep, only to be awakened by another baby who may in turn wake other sleeping babies in the room. My study concurs with others in identifying that care strategies to reduce the burden of the crying infant on maternal fatigue is important to strengthen family health (Kurth et al. 2011; Kurth et al. 2010). The Australasian Health Facility Guidelines (Australasian health infrastructure alliance 2017a) support these findings in recognising that a crying infant can be a source of stress to others, and recommend the provision of single rooms as a way of reducing this impact.

In an ethnographic study from a tertiary referral hospital in the USA where nurse/midwives, caring for breastfeeding women overnight were interviewed and observed, the type of environment in which women were housed was not described (Grassley, Clark & Schleis 2015). Three themes developed, with the first theme, “Competing priorities” describing how the staff had to navigate the competing priorities of mothers getting adequate rest with the infants’ night time feeding patterns, the presence of visitors, the needs of other women and the need to support breastfeeding (Grassley, Clark & Schleis 2015). The nurse-midwives said visitors contributed to long periods of time without the infant feeding due to the mother’s embarrassment of public breastfeeding and resulted in the infants feeding for long periods overnight (Grassley, Clark & Schleis 2015). One nurse said,

“We have lots of visitors. I think that makes it difficult ... I think if we didn’t have so many visitors maybe people would put the baby to breast sooner, instead of passing the baby around” (Grassley, Clark & Schleis 2015, p. 570).

Within my study some visitors (partner or baby’s grandmother) were observed to remain during the day. Visiting hours were from 9am – 8.00pm in shared wards and for designated visitors, twenty four hours a day in single rooms. It was only after visiting hours ended within the shared wards that the infant crying increased, as infants had been cared for by the visitors (Appendix D, Images 8, 13 and 15) between breastfeeding to allow the mother to rest. Without the visitor support some women found it difficult to manage. Grassley and colleagues (2015) described how the reality of a newborn’s feeding and sleeping patterns were in contrast to unrealistic expectations of the mother’s need to sleep and the staffing of the ward overnight. The second night after

the birth was seen as particularly problematic as one nurse said:

“The second night the babies usually get super fussy and they’re on the breast sometimes all night long...Mum doesn’t get any sleep from the first night, then the second night the baby’s fussy, and it’s just too much for them and she (the Mum) just wants to sleep” (Grassley, Clark & Schleis, 2015 p. 570).

The nurses said they found the issue of supporting the infant feeding dyad difficult with the competing priorities of caring for other women particularly when the ward was busy (Grassley, Clark & Schleis 2015). In my study, during the night, women became fatigued without family support. Some women were unable to care for their infant due to post-operative recovery. Midwives were observed to care for crying and unsettled infants between breastfeeds by carrying the infant or sharing care of the baby at the desk. Women in some single rooms said they alternated their partner with other family members (such as the baby’s grandmother) overnight to share the burden of their care. This was felt to be necessary due to having to wait too long for the busy midwives to give them support. Women said that long waits for support made breastfeeding hard.

Having “Influential Institutional Structures” was the third theme from the study by Grassley and colleagues (2015) and is congruent with many studies from around the world (Dykes 2005a, 2006, 2009). Although 24-hour rooming-in was encouraged in this study, the authors described the night time usage patterns of the newborn nursery increased by 50% as the night progressed (Clark & Schleis 2015). Another example of “Influential Institutional Structures” at night which may inhibit breastfeeding were the nurse/midwife to mother/baby ratios of one nurse-midwife to six mother/baby pairs in an environment which did not accommodate family support (Beake et al. 2010; Grassley, Clark & Schleis 2015; Larkin, Begley & Devane 2012).

The findings from the Grassley et al. (2015) study concur with my study findings and my experience and education as a lactation consultant. Research has revealed that the infant’s brain is wired to be close to their parents or family members in order to

be kept safe and protected from danger (McKenna Ball & Gettler 2007). From my observations within the postnatal ward the infants cried when the visiting hours ended and the father or other family members were not present to nurse the infants and they were placed alone in their cot. Grassley et al. also found that, without family support to help nurse/hold the baby or be present for the mother to have the baby within skin to skin contact, the baby cried when being put in the cot (Grassley, Clark & Schleis 2015). James McKenna, an anthropologist and internationally recognised infant sleep expert teaches that from an anthropological perspective, the time period (since the industrial revolution), that has elapsed between now and when women were required to be separated from the babies to work has not been adequate for the infants brain to evolve. Infants require close proximity to parents to feel safe (McKenna, Ball & Gettler 2007; McKenna et al. 1993). Without an environment supportive of close parental contact or an environment to support skin to skin contact safely, the reality of the newborn's biological needs is not being met. Excessive crying may result in distressed mothers, increased dummy or artificial baby milk usage, nursery care (where nurseries exist), or babies being brought to the desk to be cared for by midwives (Dumas et al. 2013; Erlandsson et al. 2007; Grassley, Clark & Schleis 2015; Klingaman 2009; Rayner et al. 2008; Sheehan, Schmied & Barclay 2009).

Women were disturbed by the noise from other women's visitors and found the close proximity of other people in their room intrusive. They suggested that the noise from constant visitors could be limited by providing a space away from the beds, such as a sitting room, or by reducing visitor numbers. Women enjoyed the celebratory aspect of family and friends visiting following birth, but they were worried by the lack of facilities to protect and promote rest for women from the extra noise this created. In an Irish study, following an audit, visiting hours were reduced during the week to evenings only, to enable women to obtain more rest during the day (Doyle 2015). The audit found a large percentage of the women had weaned in the middle of the night (Doyle 2015). In my study, women wanted their families present to help. Reducing visiting hours may only increase women's feelings of isolation. In another Irish qualitative descriptive study in four maternity hospitals, women expressed feelings of

isolation and loneliness being in hospital. Women stated that there were not enough people to look after them and they were critical of the organisational structures (Larkin, Begley & Devane 2012).

6.1.2 Subtheme two: “Behind the curtains”

Women within my study described breastfeeding as an intimate act. The close confines of the shared ward with curtains were inadequate to separate women and infants from one another, making them feel exposed and embarrassed. Maternal anxiety and stress is recognised in the research literature as a reason for inhibition of the breastmilk ejection reflex (Kendall-Tackett, Cong & Hale 2015; Wahyuni & Aji 2021). The physical proximity of visitors behind the curtains was found to impact breastfeeding. Women said they did not like expressing milk or breastfeeding alongside strangers located behind the curtains they had pulled around their beds for privacy. They were worried, stressed and on high alert in case their curtains were opened, and they were exposed. Conversely, Fiona Dykes, a Scottish researcher who studied women’s experience of breastfeeding in public, identified that women in her studies felt safe from the “public gaze” when behind the curtains in hospital wards (Dykes 2007). The reasons for the contrasting findings are unclear but may be due to the change in acuity, setting or expectations of postnatal women today compared with the women in Dyke’s study which is now 14 years old.

Some women in my study were observed to sooth their baby by breastfeeding frequently so as not to disturb other women within the shared room (Almqvist-Tangen et al. 2012). While putting the baby to the breast to comfort the infant is normal and necessary to increase milk production it may result in sore nipples and cause the introduction of artificial baby milk (Buck et al. 2014). Research demonstrates that 65% of women have nipple pain or damage within the first few days of birth (Buck et al. 2014). In my clinical experience, the nipple pain and damage caused from constant (cluster) feeding or poor attachment can be likened to wearing in a new pair of shoes and cause a mother to dread the next feed. As demonstrated

by several international studies, the middle of the night is a time of high risk for both the staff and mothers to introduce artificial milk, due to a lack of adequate support (Doyle 2015; Klingaman 2009). In my study, women accommodated in shared rooms behind the curtains, appeared to be more likely to request early discharge. Further research is needed to fully explore this. During an observational period, one woman, dependent on her partner to help with mobility and support with baby care during the day, requested discharge home within 24 hours of a caesarean section. This scenario was repeated in similar ways by several women in shared rooms. The women did not want to remain alone during the night, without their partners or family members to help them, and left hospital before acquiring adequate breastfeeding skills. It is unclear from this study whether the breastfeeding support they received at home was adequate.

6.1.2.1 Opening and closing curtains

When the 4-bed rooms were not fully occupied, women adjusted the curtains. By opening the curtains around empty beds, they were able to make more space and increase the airflow around themselves, whilst keeping curtains closed around them to maximise privacy. As most women possessed mobile phones, they could talk with family and friends when required. Curtains surrounding occupied beds were closed for the majority of the time, despite requests from hospital staff to open them. Kitchen staff found it difficult to deliver food safely, as mothers did not open their curtains when requested. The lack of space in the shared room when the curtains were closed was observed to cause staff and visitors to bump into unseen objects behind the curtains or to accidentally drag the curtains open as there was little room to maneuver equipment such as medication trolleys between the beds. Several studies have identified how women position their curtains and use them to signal their needs. Studies have suggested that total closure of the curtains signals that women want to withdraw completely, while partly opened curtains demonstrate a need for support (Beake et al. 2010; Burden 1998; Wray 2012). Indicating a need for support by using partly opened curtains was not evident in my study, since the curtains were rarely opened and most women signaled by ringing their call bells when needing assistance.

6.1.3 Subtheme three: “Babies at the desk”

The final subtheme of “Being on Guard” was “Babies at the desk”, which described the practice of midwives bringing infants to the midwives’ station (the desk) during the night, sharing care with other midwives while they were busy caring for other women. Without a family member present or a well-baby nursery, midwives had few options if the mother was rooming-in alone unwell, unsafe due to medications such as analgesics for pain relief, or exhausted. Maintaining quiet to help women rest in shared 4-bed rooms was a priority for midwives, so bringing the infant out of the room to the desk, was the only option. There, midwives could share the care of the babies while simultaneously listening for women who used their call bells to seek assistance. On occasions in my study, babies were observed to be left unattended in their cots at the midwife’s desk, which could be a safety issue. This practice is reflected in other research literature, but has received little attention at managerial, quality assurance or government levels (McLachlan et al. 2008; Wray 2009).

The issue of midwives caring for women’s babies at the desk has been identified in other studies. In a survey of the organisation and structure of postnatal care in 66 different maternity hospitals (tertiary, metropolitan, rural and regional) in Victoria, Australia, where rooming-in was practiced in single and shared rooms, 37 midwives made comments about rooming-in (McLachlan et al. 2008). Four respondents stated that it was difficult to provide rest for women by taking care of the baby when asked, due to lack of space and inadequate staffing levels. Another respondent said it would be good to have a special area for the babies to be cared for rather than a corridor (McLachlan et al. 2008). An ethnographic study in the UK also found infants were moved to the midwives’ station in order to “settle” the shared ward (Wray 2009). An American and Scandinavian ethnographic study found at least 50% of infants were removed from their mother’s bedside to the well-baby nursery despite rooming-in

being the hospital policy during the night. The rationale for removal of the infants was to allow rest and quieten the wards, or to care for those infants of unwell, fatigued or unsafe mothers (Grassley, Clark & Schleis 2015; Hakala 2018). Research has demonstrated that nursery care increases the usage of supplementary feeding (Bystrova et al. 2007; Hakala 2018).

Some women in my study were seen to fall asleep while breastfeeding their infants. This may have been due to the medications given for pain relief or fatigue. This unsafe sleeping practice may have resulted in the mother accidentally dropping the baby, and is a valid reason for midwives to separate mothers and infants according to the NSW Health Department safe sleeping guidelines (NSW Health 2021). However, there has been no attention paid as to where the infant who is removed from their mother should be located. Accommodation that enables a family member to be present would address this issue.

The next section of this chapter describes the second main theme of this study, "Building a Nest". The subthemes of "Space for a supporter to stay", "Feeling protected and private" and "Furnishings to support breastfeeding", demonstrate how the single room can create a safe space to facilitate breastfeeding.

6.2 Overview of Theme Two, “Building a Nest”

“Building a nest” describes how the environment within single rooms with private, co-located, en suite bathrooms, enabled families to remain together day and night, as a unit. Within the confines of the single room the physical barriers created a secure and safe space for parents and babies to be together, to bond, learn to breastfeed and care for their infant with professional support. Researchers have found that hormones are the basis for secure attachment and breastfeeding (Bowlby 1982; 1953; Odent 2007; Strathearn et al. 2009). By providing a safe space, oxytocin and prolactin, the hormones responsible for maternal attachment and feelings of love, can be facilitated. Following birth, women are physiologically primed to fall in love with their babies, while infants are primed to breastfeed (Odent 2007). Without privacy, women may be embarrassed which causes the release of stress hormones which inhibit breastfeeding (Wahyuni & Aji 2021; Dewey 2001; Mohrbacher & Kendall-Tackett 2010). Within this study, single rooms behind closed doors were found to improve the dignity of woman to allow them to breastfeed in comfort and peace while protecting the couple’s intimacy. The importance of women establishing the breastfeeding relationship with their infant cannot be underestimated (Brown 2018). Women may carry their grief, at not succeeding to breastfeed their infant or reaching their breastfeeding goals, into old age (Brown, 2018, 2019).

Parents in single rooms were found to be in control of their environment and enabled to rest or breastfeed when needed, without being intruded upon by the busyness of the postnatal ward. Single rooms protected the women’s privacy and confidentiality and shielded women from embarrassment caused by the gender specific nature of being a postnatal woman. Similar to my study, studies from the UK and the Netherlands demonstrate single rooms improve the dignity of a patient, and state privacy and confidentiality are fundamental to the individual’s well-being (Phiri 2005). Single rooms also enhance communication between health workers and single room occupants (Phiri 2005; Bhaskar, Koumoussidis & Vause 2013; van de Glind, van Dulmen & Goossensen 2008).

6.2.1 Subtheme one: “Space for a supporter to stay”.

On a Likert-type scale with 0 being the least important and 5 the most important, couples within my study rated the importance of remaining together highly (4-5), a finding that concurs with many studies from Australia and overseas (Forster et al. 2008; Hildingsson et al. 2009; Hildingsson 2007; Persson et al. 2012; Persson et al. 2011; Waldenström, Rudman & Hildingsson 2006; Maben et al. 2015a, 2015b). A recent New Zealand study found 98.6% of 212 women highly rated the importance of having a single room as did 74% of 50 midwives (Lawal 2020). The author postulated fewer midwives rated single rooms highly because of workload stresses and an inadequate number of single rooms (Lawal 2020).

The executive summary of the new single room hospital report of the Leeds Nuffield Hospital in the North of England stated:

“Overall providing each patient with a single room the hospital recognises the dignity of the person as an individual and guarantees that patient one of the basic human rights – the right to privacy and therefore compliance of the Human Rights Act 1988 - to preserve the dignity, privacy and confidentiality of the patient” (Phiri 2004, p.3).

Other studies support the presence of the father or partner in the postnatal period, in terms of security and family well-being (Persson et al. 2012; Persson et al. 2011). These studies recommended the inclusion of the father (or partner) during the whole birthing process, including remaining overnight during the postnatal period. It was suggested that midwives would strengthen the fathering role by including them in postnatal care (Persson et al. 2012; Persson et al. 2011). This includes promoting and supporting skin to skin contact with the baby.

Skin to skin contact was more easily achieved with either parent in single rooms in my study, due to the improved furnishings and extra privacy provided. Skin to skin contact with parents is mandatory for well babies in BFHI accredited hospitals (NSW Ministry of Health 2018). Supporting families to promote skin to skin contact has been demonstrated to promote positive bonding and attachment with parents and their

infants, and aids breastfeeding (Bigelow et al. 2012; Bowlby & Ainsworth 2013; Bystrova et al. 2009; Bystrova et al. 2007; Dumas et al. 2013; Johnson 2013).

Skin to skin contact with newborns has many recognised benefits. In a RCT of 29 father-infant pairs who were divided into one group of infants receiving skin to skin contact with their father, or the second group placed in a cot next to their father, the infants who had skin to skin contact cried less and were soothed sooner than those infants within the cot (Erlandsson et al. 2007). It was hypothesised by the study authors that this may conserve the infant's energy and reduce infant weight loss while making it more likely that the settled infant would be rested and have improved breastfeeding when reunited with the mother (Chen et al. 2017; Erlandsson et al. 2007). In my study, fathers were seen having skin to skin contact with their babies in the single rooms while lying on the large arm chair (Appendix D, Images 13 & 15). No fathers were seen having skin to skin contact with their infants in the shared room, possibly due to the inadequacies of the furnishings or potential embarrassment from lack of privacy.

Rural disadvantage was highlighted within my study. Parents spoke of the importance of a single room to accommodate both parents when they resided long distances from the hospital. Self-reported stress and anxiety levels were found to be high when an infant from an outlying area required admission to the neonatal special care unit if the baby was premature or sick. Stress was also exacerbated by the parents having to leave their communities, often with an associated financial burden as the partner would have to purchase accommodation nearby. Studies demonstrate that highly stressed mothers are at high risk of not producing adequate milk, possibly resulting in complications for the infant and ultimately increasing health costs (Hansen 2016; Hoban et al. 2018). As recommended by several studies, keeping these parents together, within a comfortable environment, may help decrease stress and ultimately improve breastfeeding outcomes and satisfaction with the postnatal hospital stay (Hildingsson et al. 2009; Waldenström, Rudman & Hildingsson 2006).

For some first-time mothers, having a baby was their first time in hospital and some studies have described the differing needs of first-time mothers compared to women who have had other children (Forster et al. 2008; Bhavnani & Newburn 2010; Sheehan, Schmied & Barclay 2009). Within my study, first time mothers were found to be more relaxed in single rooms where they could remain with their partner or a family member. In the shared rooms, some first-time mothers who were interviewed immediately prior to hospital discharge said they preferred to leave early and be with their partner, saying they did not want the baby's father excluded during this special time. First time mothers said that it was important to have their partners present as they felt stressed being alone. Having a space for the supporter to stay emerged as an important subtheme of "Building a nest".

6.2.2 Subtheme two: "Feeling protected and private"

Within single rooms, all couples said their confidentiality and privacy was protected. Within single rooms, new mothers and midwives could communicate freely. This was an important advantage. Women in a shared room may withhold sensitive information for fear of being heard through the curtains. Optimum history taking is essential and without a single room, women with complex issues such as a history of sexual abuse may not divulge important information that may ultimately affect their care. These findings concur with a UK survey of 60 postnatal mothers staying in shared four bed bays at St Mary's hospital for women and children which found that maternity ward rounds were a time for a breach of confidentiality (Bhaskar, Koumoussidis & Vause 2013). Forty percent of the 60 women who answered the questions thought provision of more single rooms was a solution, with another group suggesting speaking in low tones or using an examination room for discussions about mental health problems, medications or social issues. Another group suggested conversations should be avoided during visiting hours as curtains between beds were inadequate to protect women's confidentiality, and conversations could be overheard (Bhaskar, Koumoussidis & Vause 2013). In the Netherlands, an observational study of communication between physicians and patients in a urology ward found improved communication occurred between clinicians and patients when accommodated in

single rooms where sensitive issues could be discussed with physicians spent longer periods of time with patients in single rooms (van de Glind, van Dulmen & Goossensen 2008).

All couples said they felt protected from embarrassment behind the physical barriers of their single room, a finding which concurs with many studies in the UK (Maben et al. 2015a, 2015b; Phiri 2004). The en suite bathroom and toilet facilities within close proximity to the bed within single rooms made it easier to achieve adequate personal hygiene for both parents. In the UK, researchers studying single and shared hospital rooms found single rooms protected the 'patient' from embarrassment when managing personal hygiene and toileting (Maben et al. 2015b). This finding concurs with my study, which found women were exposed to embarrassment in shared rooms which had shared toilets situated outside the room, off the main corridor. Single room en suites meant fathers did not have to leave the ward to find a shower or toilet.

In single room accommodation, families were facilitated in culturally appropriate practices. In some cultures the inclusion of a support person, such as a mother or grandmother, to remain and provide support to help the new mother rest by providing help with baby care is appropriate (Ekström, Widström & Nissen 2003; Grassley & Eschiti 2008; Rice 2010). In my study, there were a number of women from countries such as India, Pakistan, Saudi Arabia and China, where the support of other women was culturally important. Without a single room that allowed a support person to remain overnight to help with baby care and breastfeeding, the use of artificial baby milk may increase.

6.2.3 Subtheme three: “Furnishings to support breastfeeding”

Families within this study said a more nurturing environment to promote breastfeeding was required. The lack of family-friendly spaces away from the bedside, with furnishings such as a comfortable lounge or table and chairs to sit at together, was seen as a major deficit. Women were worried by their visitors intruding upon other women resting within the shared rooms which concurred with other studies within Australia and overseas (Rayner et al. 2008; Beake et al. 2010; Wray 2012). Fathers did not feel welcome within the shared rooms due to the inadequacy of the

furnishings and being within such close proximity to other women behind the curtains.

A comfortable nurturing space where the mother or family member could calm an unsettled infant away from the bedside, with furnishings conducive to settling an infant such as a rocking chair or a radio or television, may make baby care less arduous. Several women said a dimmer switch to subdue lighting was an important part of supporting women to breastfeed and settle their infants.

Women within this study had different furnishing needs when breastfeeding. While women who had operative births preferred to breastfeed in a chair out of bed, mothers who had given birth vaginally and sustained an injury to their perineum preferred to feed lying down. Women with limited mobility due to perineal injury or caesarean surgery appreciated cots which had fold-down sides that could be raised up and down beside the mother's bed to facilitate access to the baby (Appendix D, Images 6 and 10). Although there is no evidence that breastfeeding rates increase when using similar cots (Klingaman 2009), it may improve women's postnatal experiences and comfort.

The lack of a nearby public toilet for partners and visitors from shared rooms, lack of comfortable chairs for visitors, the lack of a comfortable family space other than outside the ward revealed the conflicting priorities of the families and the institution. While women wanted their partners or family members to remain and help, the environment was unsupportive. Other researchers in Australia and overseas have similarly advocated for more comfortable family-friendly places to relax away from the bedside in the maternity setting (Rayner et al. 2008; Beake et al. 2010; Wray 2012).

6.3 Caesarean Section and Breastfeeding

Having a caesarean section is associated with lower breastfeeding rates (Australian Institute of Health and Welfare 2011; Department of Health and Aging 2019; Kelly 2012; O'Connor et al. 2018). In NSW in 2019, 22.7% of women experienced an elective caesarean birth and 12.4% women experienced an emergency caesarean with an

overall rate of 35% (AIHW 2018). Hence this may be a serious problem for future rates of breastfeeding.

The increased pain of an operative birth limits women's movements and ability to care for their baby. Without the support of family within the hospital environment, women can also feel isolated and frightened (Kendall-Tackett, Cong & Hale 2015; Wahyuni & Aji 2021). The resultant stress is counter-productive when breastfeeding. Following a caesarean birth the increased pain, lack of mobility and increased sleepiness from the opiates given to control the pain may make it difficult or unsafe for the mother to manage baby care and breastfeeding alone (Chamberlain et al. 2017; Kelly 2012; Klingaman 2009; O'Connor et al. 2018). Following an operative birth mandatory requirements require staff to monitor the woman closely and are designed to keep the mother and infant safe during the immediate post-operative period but may simultaneously disturb the rest of other women in the shared room (Kurth et al. 2010).

Following a Caesarean section Infants are prone to the gagging and vomiting of mucus and lack interest in breastfeeding (Klingaman 2009). These infants can take up to 48 hours to eliminate the mucus and show interest in sucking at the breast. Without adequate care and knowledge to support these mother infant dyads, particularly during the night, artificial bottle feeding may be introduced (Klingaman 2009, O'Connor et al).

An Australian study of breastfeeding rates at hospital discharge demonstrated that exclusive breastfeeding in hospital was positively associated with exclusive breastfeeding rates at three and six months of age (Kelly 2012). In a more recent study from Canada exclusivity of breastfeeding in hospital was associated with improved breastfeeding outcomes and infant weight gain (Azad et al. 2018; Vehling et al. 2018).

In order to improve breastfeeding rates in Australia, the accommodation provided for women and their families in hospital needs to be reconsidered. The profile of the hospitalised postnatal woman has changed over the decades since BFHI and rooming-in were implemented. I would argue that there needs to be a revaluation of the postnatal care environment as a matter of urgency to enable all women to have a

single room. In addition, women who have birthed by Caesarean section, as a matter of priority, should be enabled to have a partner or family member remain overnight. A single room would enable this to happen.

6.4 Study Strengths and Limitations

Ethnography was chosen for this study to give voice to the women and families. Ethnographic methods were used to add richness to the data and validate the data collected in “participant observations” and photographs. As only one hospital site was used, this may be considered a study limitation, however I have worked in many tertiary referral maternity hospitals over a long career in Australia, and the UK and observed that the housing of postnatal women in large tertiary maternity hospitals has seen minimal change. The evidence from similar studies in other parts of Australia and internationally, support many of the findings from this study, which suggests the findings are indeed transferable.

A strength of conducting a qualitative study was to hear from women and their partners who were given time in semi-structured in-depth interviews to speak about their experiences and insights. A potential study limitation was that because the interviews were conducted prior to hospital discharge, some couples might have felt reluctant to complain while still receiving care. This limitation was addressed by follow up interviews of participants at home 4–6 weeks after leaving hospital. They had been given a period of time to reflect and change their comments if they so wished. The study was therefore designed to consider these weaknesses.

It is acknowledged that there may be some bias within this study as few women who remained in hospital for postnatal care had a spontaneous vaginal birth. As most of the women in my study had experienced a caesarean or instrumental birth, had underlying complications or had given birth to their first baby, or both, they did reflect the maternity hospital population when the research was undertaken (personal communication Midwifery Unit Manager K2, 2021). Their views and needs may be different from those of a different cohort of women who may have had a spontaneous normal vaginal birth.

The small number of interview participants, 10 women and 6 partners, may also be regarded as a limitation. Thirty women, infants and support people were observed. However no new data emerged from the interviews after the fourth interview for women in either the single room or shared room settings. Data from partners reflected that of the women as did data from parents who had experienced both single and shared rooms. One further interview from participants in each setting was undertaken to check that data saturation had indeed been reached (Hennick, Kaiser & Marconi 2017). Follow up interviews at 4-6 weeks remained consistent with the earlier hospital interviews.

A further limitation may be the setting for this study where the postnatal ward consisted of 4-bed shared rooms or single rooms with en suites. In some hospitals however there are 2-bed shared rooms in postnatal wards which may have benefits for women. In Switzerland, with women in 2-bed shared hospital accommodation, Kurth et al. (2010) found similar disruptions to rest and recovery with crying babies affecting women's mental wellbeing (Kurth et al. 2010). The experience of women in 2-bed shared rooms requires further research.

6.5 Implications of Study Findings

The aim of this study was to explore how the design of the postnatal hospital environment impacted women within the first few critical days following birth when learning to breastfeed. The implications of this study's findings contribute to decades of research into postnatal care in the hospital environment, with an emphasis on the impact of the postnatal hospital ward environment on breastfeeding. This study demonstrates the postnatal environment does not meet the needs of breastfeeding women and requires urgent revision.

Following birth women need their partners or family members to provide emotional and practical support. Rest and recovery are essential following birth, which is difficult when women are alone and expected to provide care for the baby and breastfeed every few hours. Shared 4-bed rooms with cubicles separated by curtains do not allow women to rest and were not designed to house infants overnight. The constant light, noise, visitors and infants crying all impact on women's ability to rest and recover due

to inadequate architectural design features. Establishing breastfeeding requires a mother to be well rested and well supported for the physiological and psychological processes to function. Without an increase in the number of single rooms where a partner or family member can remain to help, women will leave hospital ill prepared to breastfeed and remain dissatisfied with the postnatal stay.

In 2019 a survey of women in NSW found three in 10 women (32%) received conflicting advice from health professionals about feeding their baby (NSW Government 2020). Breastfeeding is a learned skill. The first few days following birth is a time of great change for breastfeeding women. Changes vary for each individual and depend on their labour, birth experience and underlying health. Without a suitable environment where professionals can support breastfeeding for both the mother and her support team women may become overwhelmed when rooming-in 24 hours a day with their infant. An unanticipated and unintended consequence of implementing the BFHI Ten Steps to successful breastfeeding (World Health Organization & UNICEF 2018) in particular Step 7, is that without an adequate and supportive postnatal environment the many other aspects of the BFHI steps cannot be accommodated and may set women up to fail.

Observations and interviews in my study demonstrated that, in the busy environment with competing demands on the midwives' time meant woman had to wait for professional support. In one study professionals were shown to spend more time with patients in single rooms (van Glind et al. 2015). Fiona Dykes described how it was difficult for midwives to form meaningful relationships with women to support them to breastfeed. She also described how the medicalisation of birthing has shifted the needs of birthing and breastfeeding women to a "production line", where the needs of the organisation and culture of the hospital are prioritised over the recovery and support needs of women (Dykes 2009). If single rooms were provided as recommended in the Australasian Health Facility Guidelines (Australasian health infrastructure alliance 2017) a more family centred approach may create an environment to allow breastfeeding knowledge from professionals be disseminated and breastfeeding demands shared.

In Sydney, Australia, a meta-ethnographic study of migrant and refugee women in high-income countries found refugee women can struggle to continue breastfeeding while managing life with a new infant in a new country (Schmied et al. 2012). Hospital design has not kept up with the changing cultural needs of the ethnically diverse Australian population, and single rooms which would support appropriate cultural practices and evidence based breastfeeding care may help alleviate some of the issues faced by these families.

Over ten years ago in Victoria, 14 of 19 private hospitals responded to a survey where it was found that 11 of the 14 hospitals had a special care nursery and six included a well-baby nursery, staffed separately from the postnatal ward (Rayner et al. 2010). Privately insured women were housed in mostly single rooms where a partner could remain overnight to help and the usage patterns of nursery care varied between 2% and 90% (Rayner et al. 2010). Two hospitals of the 14 studied reported they were Baby Friendly accredited, however, four hospitals had a rooming-in policy and eight hospitals encouraged rooming-in. Thirteen of the fourteen survey respondents commented on rooming-in with one key informant stating:

“[I] don't think [rooming-in] should be enforced all of the time if a mother is really tired and needs a good rest. Have to weigh up pros and cons of fatigue and adequate milk supply/confidence” (Rayner et al. 2010, p. 5).

Within this study the median proportion of women exclusively breastfeeding on hospital discharge was reported to be 93% (range 82 to 98%) (Rayner et al. 2010).

The implications of the study by Rayner and colleagues concur with my study in that there are times when women need vital support such as someone else to take their baby to enable them to sleep. Unless we build spaces to accommodate a support person together with the mother and baby we continue to undermine breastfeeding success.

Lactogenesis two, which is the onset of copious milk secretion, occurs 30 to 40 hours after the expulsion of the placenta. This process may be delayed if the woman has experienced underlying medical issues or interventions, for example, a postpartum

haemorrhage or caesarean section (Mohrbacher & Kendall-Tackett 2010). If the average hospital stay is 2.8 days and women leave the hospital before the milk has come in and do not have skilled support at home, they are at risk of introducing artificial milk which is detrimental to breastmilk production and supply. Research demonstrates that breastfeeding rates are highest amongst the better-resourced and educated women who have greater access to single rooms, longer hospital stays and the ability to have a partner to remain overnight during the hospital stay (Australian Institute of Health and Welfare 2011; Department of Health and Aging 2019; Rayner et al. 2010). Single room care for all women, with the extra support by a family member who can also receive education from health professionals, may be a way forward in improving breastfeeding rates and parent satisfaction with the hospital stay.

Within my study, the priorities of care appeared to be the institutional throughput, with a postnatal ward environment designed to care for a medicalised model of care rather than new mothers following birth and learning to breastfeed. Although midwifery staff tried to support women with breastfeeding and baby care, the surgical and medical issues appeared to be prioritised, with breastfeeding and mothering skills becoming of secondary importance. The short hospital stays and constant demand for beds and throughput meant that if women left hospital because their needs were not being met, it appeared of little consequence and left unnoticed by the health system. While short public hospital stays for most postnatal women may save money in the short term, the long term implications for health costs in not supporting breastfeeding are well recognised (Hansen 2016). If the postnatal hospital stay was improved for all women and the environment conducive to rest and recovery, breastfeeding outcomes may improve.

6.6 The Baby Friendly Health Initiative

The Baby Friendly Health Initiative (BFHI) is an important feature of the National Breastfeeding Strategy and is mandatory in NSW (Department of Health and Aging 2019; NSW Health 2018). The aims of the National Breastfeeding Strategy and the NSW Health Department Breastfeeding Policy are to improve breastfeeding rates as

a primary health care intervention (Department of Health and Aging 2019; NSW Health 2018).

In New South Wales in 2019, breastfeeding at hospital discharge data indicated breastfeeding rates were higher within the public hospital sector at 72.4% compared to 66% within the privately insured hospital maternity sector and varied within differing health districts (NSW Health, 2019). These data demonstrate that breastfeeding is a complex issue. As breastfeeding rates are so variable and have declined in both the public and private hospital sectors, the importance of the BFHI and evidence based lactation support is highlighted. Within NSW there are ten public hospitals and no private hospitals that are BFHI accredited.

The priority populations identified in the Australian Breastfeeding Strategy to improve breastfeeding outcomes (Department of Health and Aging 2019), are Indigenous women, culturally and linguistically diverse women, women of lower socio-economic status, mothers of preterm infants, young mothers (<25 years), daily smokers, obese women, and those who have had a caesarean section, or obstetric or childbirth complication (Department of Health and Aging 2019; Ogbo et al. 2016). These are often the least resourced women, who may benefit from single rooms and family-centred care, but may not be allocated either, due to lack of supply or adequate resources (Bloomer et al. 2016). In my study setting, single rooms were allocated on a needs basis, with privately insured women having access to single rooms after other prioritised women, such as those with multiple births or women with infections requiring isolation. When there were an inadequate number of single rooms, privately insured women had the option to request a transfer to the private hospital where presumably they could access single rooms. For other women they either had to accept what was provided or go home. This means that women of a lower socio-economic status without private health insurance were disadvantaged as they had less likelihood of being allocated a single room. This policy urgently needs addressing, especially whilst breastfeeding support at home is limited.

My study found that to impose rooming-in, within 4-bed shared rooms, with only curtains for privacy, disadvantaged women because they could not rest and were

stressed and anxious the curtains would be opened at any moment. Stress is counter-productive when breastfeeding. My study found the mandatory nature of rooming-in without an adequate number of single rooms failed to address the women's individual needs.

The issues that this study have illuminated have been alluded to by an Australian Government report (Smith et al. 2019) on the evidence to promote strategies which support breastfeeding and states:

“Biologically and physiologically, mothers and newborns are primed to breastfeed, but a variety of barriers create difficulties for innate behaviours in contemporary healthcare systems” (Smith et al. 2019, p. 11).

The Commonwealth Government review found there was strong evidence for the effectiveness of BFHI as a whole, and within the health system BFHI was equitable and did not reinforce social disadvantage and vulnerability (Smith et al. 2019). The report did not examine the breastfeeding environment for hospitalised women, and it could be argued that the lack of single rooms and choice of accommodation within the hospital postnatal period does not meet the individual needs of many women rooming-in with their infant or respect some cultural birthing and breastfeeding practices and may entrench social disadvantage.

Postnatal maternity care within public hospitals lack single rooms and the majority of pregnant Australian women give birth within public hospitals (AIHW 2018). NSW Health policy promotes the importance of the first 2000 days of a child's life and optimum infant feeding (NSW Ministry of Health 2019), however little has changed since Fiona Dykes described women's experience of breastfeeding in two English postnatal wards nearly fifteen years ago (Dykes 2005a; Dykes 2005b; Dykes 2006). She argued that postnatal wards were the last stop in a medicalised journey, where breastfeeding mothers were largely surrounded by strangers within a strange environment at a critical time (Dykes 2005b; Dykes 2006). This was congruent with my study, where breastfeeding women said that, despite wanting to breastfeed, the hospital shared-ward environment was inadequate, and some preferred to go home

where they could rest and be supported by family. Early discharge from hospital may undermine breastfeeding without evidence based supporters to provide correct breastfeeding information and support.

6.7 Conclusion

Over many decades, women have rated hospital postnatal care poorly, but the research into what is the optimum postpartum breastfeeding hospital environment has been sparsely studied. High initiation rates of breastfeeding demonstrate women want to breastfeed, and recent research from the UK demonstrates many women carry their grief into old age when breastfeeding does not work for them. The subsequent dramatic downward trend in breastfeeding rates within the first month following birth demonstrates a failure in the structural supports provided for women. Women do not breastfeed in isolation and there is an urgent need to implement the Australasian Health facility guidelines which recommend single rooms to allow a partner or family member remain overnight to support the family unit. The Australasian Health facility guidelines are underpinned by the National Maternity Services Plan, which places the woman at the centre of her maternity care (Commonwealth of Australia 2011). This means that care is coordinated according to the needs of the woman, and includes “her cultural, emotional, psychological and clinical needs, close to where she lives” (Commonwealth of Australia 2011, p 3). Learning to breastfeed in a hospital environment requires all these aspects of care to be addressed.

Arguably, the poor status of postnatal care is historical and a direct reflection of gender-specific bias. Breastfeeding has long been considered free; however, breastfeeding is not free, it is unpaid labour requiring women to be on call at least eighteen hours a week and saves millions in health care costs each year. The exclusion of breastmilk from national accounting is a product of an outdated economic system that exploits women and requires urgent attention.

Families who participated in this ethnographic study came forward eagerly, following the birth of their infants, wanting to add their voices to research which may change and improve the hospital stay for new families wanting to breastfeed. The parents

recognised the advantages of single room care and said it was important a partner or family member could remain to increase the security of the mother while in a quiet private space to facilitate bonding and breastfeeding. By implementing the Australasian Health Facility Maternity guidelines, single room postnatal care will facilitate equitable care and allow new parents to support each other to celebrate the arrival of their infant in peace and privacy which will promote breastfeeding.

Appendix A: Ethics approval letter, Information sheet, Consent form



29 April 2019

Mrs Susanna Scurry
Faculty of Health
University of Technology

Dear Mrs Scurry,

Re: 2019/ETH00187: What is the impact of the hospital postnatal ward environment on the breastfeeding experiences on primigravid mothers and babies? An ethnographic study

NSW REGIS Project ID: 2019/PID00193
NSW REGIS Application ID: 2019/ETH00187

Thank you for submitting the above application for single ethical review for a multi-centre study. This project was first considered by the Hunter New England Human Research Ethics Committee at its meeting held on **20 march 2019**. This Human Research Ethics Committee is constituted and operates in accordance with the National Health and Medical Research Council's *National Statement on Ethical Conduct in Human Research, 2007 (updated 2018)* (National Statement) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*. Further, this Committee has been certified under the National Health and Medical Research Council's *National Certification Scheme for the Ethical Review of Multi-Centre Human Research*. The Committee's Terms of Reference are available from the Hunter New England Local Health District website.

I am pleased to advise, the Hunter New England Human Research Ethics Committee has determined that the above protocol meets the requirements of the National Statement and following acceptance of the requested clarifications and revised HREA and Participant Information Statement by Dr Nicole Gerrand Manager, Research Ethics

& Governance, under delegated authority from the Committee, grants ethical approval of the above project.

The National Statement, which the Committee is obliged to adhere to, include the requirement that the Committee monitors the research protocols it has approved.

Ethics Approval will be for 5 years and subject to the following conditions:

- A report on the progress of the above protocol is to be submitted at 12 monthly intervals. A proforma for the annual report will be sent at the beginning of the month of the anniversary of approval. Your review date is **April 2020**.
- All variations or amendments to this protocol must be forwarded to, and approved by, the Hunter New England Human Research Ethics Committee prior to their implementation.
- A final report must be submitted at the completion of the above protocol, that is, after data analysis has been completed and a final report compiled.
- Adherence to the safety reporting requirements of the with the NHMRC Safety Monitoring and Reporting Guidance for Therapeutic Goods Trials (November 2016) available at https://www.nhmrc.gov.au/files_nhmrc/file/publications/16469_nhmrc_-_ahec_position_statement-web.pdf

Hunter New England Research Ethics & Governance Office

Locked Bag No 1

HRMC NSW 2310

Telephone: (02) 49214950

Email: HNELHD-HREC@health.nsw.gov.au <http://www.hnehealth.nsw.gov.au/ethics/Pages/Research-Ethics-and-Governance-Unit.aspx>

- If for some reason the above protocol does not commence (for example it does not receive funding); is suspended or discontinued, please inform Dr Nicole Gerrand as soon as possible.
- If the study has not been completed by **April 2024** a Renewal Application will be required.

Document	Version	Date
HREA [Application ID: 2019/ETH00187]	Version 4	15 April 2019
HREC Response Letter		30 March 2019
Protocol	Version 2	5 April 2019
Participant Invitation Letter	Version 2	16 April 2019
Participant Information Sheet and Consent Form	Version 3	16 April 2019
Recruitment Flyer	REGIS Version 4	16 April 2019
Flyer Observation of Postnatal Ward Environment	REGIS Version 4	16 April 2019
Trigger Questions for Short Telephone Interview	REGIS Version 4	16 April 2019
Trigger Questions for Hospital Interview	REGIS Version 4	16 April 2019
Photo Consent Form	REGIS Version 4	16 April 2019

The following documentation has been reviewed and approved by the Hunter New England Human Research Ethics Committee:

Approval has been granted for this study to take place at the following sites:

- **John Hunter Hospital**

You are reminded that this letter constitutes ethical approval only. You must not commence this research project at a site until separate authorisation from the Chief Executive or delegate of that site has been obtained.

A copy of this letter must be forwarded to all site investigators for submission to the relevant Research Governance Officer.

Should you have any concerns or questions about your research, please contact Dr Gerrand as per the details at the bottom of the page. The Hunter New England Human Research Ethics Committee wishes you every success in your research.

Please quote **2019/ETH00187** in all correspondence.

The Hunter New England Human Research Ethics Committee wishes you every success in your research.

Yours faithfully



For: A/Professor A Vertigan
Acting Chair
Hunter New England Human Research Ethics Committee

PARTICIPANT INFORMATION SHEET

What is the impact of the hospital postnatal ward environment on the breastfeeding experiences on first time mothers and babies? An ethnographic study.

UTS HREC 2019/ETH187 / HNEHREC NUMBER 2019/ETH00187

WHO IS DOING THE RESEARCH?

My name is Susanna Scurry and I am student at UTS. My supervisor is Dr. Deborah Fox

WHAT IS THIS RESEARCH ABOUT?

This research is to find out about the breastfeeding experiences of new first time mothers establishing breastfeeding while in hospital following birth.

WHY HAVE I BEEN ASKED?

You have been invited to participate in this study because you are a first time mother of a singleton pregnancy who plans to breastfeed. I would like to know how the hospital environment impacts your breastfeeding experience.

IF I SAY YES, WHAT WILL IT INVOLVE?

If you decide to participate, I will invite you to take part in a 30 minute interview while in hospital and again a 5-10 minute interview 4-6 weeks after the infant's birth by telephone, I will discuss with you your experiences of the hospital environment while establishing breastfeeding. For example

1. Could you tell me about your experiences since coming to the postnatal ward?
2. I am interested in knowing if you were able to rest and would you talk about hospital environment?
3. Did you feel you could control the amount of light or noise at night or when you wanted to rest? Can you talk to me about how you managed this area of your hospital stay?

The interviews will be audio recorded to allow a free flowing conversation and accuracy following the interview when data is being interpreted.

Some photographs maybe taken but will be of furnishings, the environment and feet to give an idea of numbers and traffic flow within the space used by new mothers. Any identifying features of women will not be used. You will be shown copies of your interview and any photographs relevant to review and approve or disallow for research analysis and use.

ARE THERE ANY RISKS/INCONVENIENCE?

Yes, there are some risks/inconvenience, including the time taken to be interviewed and the fact that you may be embarrassed by discussing your breastfeeding experience. If you feel any embarrassment or discomfort when being interviewed you can conclude

the interview and the researcher will arrange for a social worker to address any concerns with appropriate staff, for example the medical team or midwife.

DO I HAVE TO SAY YES?

Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.

WHAT WILL HAPPEN IF I SAY NO?

If you decide not to participate, it will not affect your relationships at the John Hunter Hospital or your hospital care or your relationships with UTS or the researcher. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason, by contacting Susanna.I.Scurry@student.uts.edu.au or on [redacted]. If you withdraw from the study, audio recordings will be erased; the transcripts will be destroyed.

CONFIDENTIALITY

By signing the consent form you consent to the research team collecting personal information about you for the research project. All this information will be treated confidentially. Pseudonyms will be used to protect your confidentiality. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law. At the end of 5 years all data will be destroyed. In any publication, information will be provided in such a way that you cannot be identified. Photographs taken will not include any identifying features of women. They will be of furnishings within the postnatal ward and feet to allow for data to be collected re numbers of participants who use the ward space over different times.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?

This research has been approved by the Hunter New England Human Research Ethics Committee of Hunter New England Local Health District, Reference 2019/ETH00187

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to Dr Nicole Gerrard, Manager Research Ethics and Governance, Hunter New England Local Health District, Locked Bag 1, New Lambton NSW 2305, telephone (02) 49214950, email HNELHED-HREC@hnehealth.nsw.gov.au

If you have concerns about the research that you think I or my supervisor can help you with, please feel free to contact me on susanna.i.scurry@student.uts.edu.au or [redacted]. You will be given a complaint form to use if required and a copy of this form to keep.

NOTE:

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, and quote the UTS HREC reference number. Any matter raised will be treated confidentially, investigated and you will be informed of the outcome.

CONSENT FORM

What is the impact of the hospital postnatal ward environment on the breastfeeding experiences on primigravid mothers and babies? An ethnographic study **UTS HREC APPROVAL NUMBER / HNEHREC 2019/ETH00187**

I _____ *[participant's name]* agree to participate in the research project, "What is the impact of the hospital postnatal ward environment on the breastfeeding experiences on primigravid mothers and babies? An ethnographic study, *[UTS HREC approval reference number when obtained]* being conducted by Susanna Scurry.

I have read the Participant Information Sheet and I understand the purposes, procedures and risks of the research as described in the Participant Information Sheet.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time without affecting my relationship with the researchers or the University of Technology Sydney or with my caregivers at John Hunter Hospital.

I understand that I will be given a signed copy of the Information Sheet to keep.

I agree to be:

- Audio recorded
 Photographed

I agree that the research data gathered from this project may be published in a form that:

- Does not identify me in any way

I am aware that I can contact Susanna Scurry if I have any concerns about the research.

Name and Signature [participant]

Date ____/____/____

Name and Signature [researcher or delegate]

Date ____/____/____

sm

Appendix B.1: Trigger questions for interviews

Interview Number.....

Type of Birth	
Days postpartum.	Primi/Multi
Ethnicity	Intention to Feed

- 1) How have you found it here in the postnatal ward?
 - 2) How have you found your ability to rest here?
 - 3) Tell me more about how you are able to control the amount of light or noise - during the day – during the night
 - 5) Where do you usually sit to feed your baby and is there enough space here in your room or do you go elsewhere to feed?
 - 6) Tell me more about who is available to help with baby care
 - 7) Is your partner or a family member able to stay overnight to help care for the baby or help you?
-
- 7b) On a scale of 0 to 5 with 5 being the most important and 0 the least important where would you rate the importance of having your partner or family member remaining with you in hospital overnight?
 - 8) How do you manage to control the number of visitors?
 - 9) How is your privacy protected?
 - 10) Is there anything you would like to suggest to make an improvement to the hospital stay?

Appendix B.2: Trigger Questions for 4-6weeks Post discharge Interview

Type of birth	_____	Elective	_____
Days PP	_____	Multi/Primi	_____
		Intent to	_____
Ethnicity	_____	BF:	_____

Introduction. Follow-up interview at 4-6 weeks post-discharge. By undertaking research, we hope to improve the service for women and the staff caring for them.

- 1) How many days did you remain in hospital?
- 2) Did you have a family member remain in hospital to provide support overnight? (if yes- how was that; if no – how was that?)
- 3) What kind of support would have been ideal?
- 4) How are you feeding your infant now you are at home?
- 5) Could you tell me about your breastfeeding experience in hospital? Have you any suggestions that would help other women when breastfeeding in hospital?
- 6) Can you tell me more about your room in the hospital? How comfortable was it? Were there any uncomfortable aspects?
- 7) Did you feel the space was private? Tell me more about that.

Appendix C: Included studies: settings, participants and interventions

Table 2. 3: Included studies: settings, participants and interventions

ACUTE Hospital Settings					
Author, Year & Country	Research Aim	Study Design and Methods	Participants and Setting	Analysis	Results/Findings
Chaudhury, H., Mahmood, A., Valente, M. 2005 Canada & U.S.A.	To determine the advantages and disadvantages of single versus multiple-occupancy rooms in acute care environments.	A review of the Literature	110 articles included.	A framework based on 3 questions. 1. Organizational costs, 2. Hospital management & patient care 3. Therapeutic impact	Comparison of patient centred care & room density. Single rooms enhanced privacy, confidentiality, support person, accommodation & noise reduction.
Bloomer, M., Lee, S F., Lewis D P., Biro, M A., Moss, C. 2014 Australia	To determine single-room usage patterns and allocation decision-making in an Australian public hospital.	Sequential exploratory design. Descriptive survey. Measuring single room occupancy over a 2 week period	One public hospital in one Australian state	Descriptive statistics	Bed occupancy in single rooms did not fall below 99.4% in the 2week study period
Van de Glind, I., de Roode, S. Goossensen, A. 2007	To examine whether patients in hospitals	A literature review	103 articles found; 25 studies selected.	6 measured outcomes: - 1. Privacy & dignity 2. noise & sleep quality 3. Satisfaction with care	RCTs scarce empirical studies found.

Netherlands	benefit from single rooms.			4. Infection rates 5. patient safety 6. Recovery rates	
Van de Glind, I., van Dulmen, S. _Goossensen, A. 2008 Netherlands	To examine physician-patient communication in single-bed versus 4-bed hospital rooms.	Observational study	21 encounters & interviews within single rooms and 31 encounters in 4-bed rooms	Comparison of 10 single room with 4-bed rooms in urology ward	Single rooms contribute positively to physician–patient communication.
Maben, J., Griffiths, P., Penfold, C., Simon, M., Pizzo, E., Anderson, J., Robert, G., Hughes, J., Murrells, T. & Brearley, S. 2015, U.K.	To evaluate a major innovation in hospital design: ‘all single-room’ hospital accommodation.	Thematic and cross case analysis of in-depth interviews	32 in-depth interviews conducted with ‘general’ patients and some women receiving maternity care who had recently stayed, or were currently staying, on the 4 case study wards.	Thematic and cross case analysis	Women in the maternity ward expressed a preference for single rooms, which they expected would provide more security, privacy and physical comfort than an open ward.
Maben, J., Griffiths, P., Penfold, C., Simon, Anderson, J.E., Robert, G., Pizzo, E., Hughes, J., Murrells, T. & Barlow, J. 2016, U.K.	Evaluation of the impact of 100% single-room accommodation on staff and patient experience, safety, and costs.	Quasi-experimental before-and-after study with two control hospitals	Identify impact of change from 2 old hospitals in Southern England with newly opened facility.	Before and after analysis of staff and patient experiences. Pre & post move interview.	Two thirds of the patients preferred single rooms with comfort and control out-weighing any disadvantages such as isolation.

Phiri, M. 2005 U.K.	To evaluate the impact of single room design at the new Leeds Nuffield Hospital.	A Literature of 37 studies was conducted as part of the design stage when building a new single room facility at the Leeds Nuffield Hospital.	New build of all single room hospital in Yorkshire, United Kingdom	A Comparison of the design of the new Leeds Nuffield hospital was made with existing hospitals within the United States, European Union and other hospitals with the United Kingdom	Eleven inter-related issues indicated a very strong case for single-occupancy inpatient accommodation identified including enhanced privacy, meeting patients' expectations and preferences
O'Connor, M., O'Brien, A., Bloomer, M., Morphett, J., Peters, L., Hall, H., Parry, A., Recoche, K., Lee, S. & Munro, I. 2012 Australia	To examine commonalities and differences in the design and use of space across healthcare settings.	Literature review	74 included papers	Five themes analysed: the design of physical space, family needs, privacy considerations, the impact of technology, and patient safety.	Highlights the positive & negative differences of different hospital environment space on outcomes for patients & families. Postnatal care not part of review.

MATERNITY Hospital Settings					
Jaafar, S.H., Lee, K. S., Ho, JJ. 2016. International	To assess the effect of mother-infant separation versus rooming-in on the duration of breastfeeding.	Literature Review	Maternity Care settings 23 reports from 19 trials identified. One trial (involving 176 women) met inclusion criteria	Analysis by 2 review authors to assess studies for quality and accuracy.	There is insufficient evidence from RCTs to assess the effect of mother-infant separation versus rooming-in for increasing duration of breastfeeding & other maternal& fetal outcomes Further research required.
Forster, D.A., McLachlan, H.L., Rayner, J., Yelland, J., Gold, L & Rayner, S. 2008 Australia	To explore women's views, expectations and experiences of early postnatal care in Victoria, Australia.	Qualitative exploratory study using data collected via focus groups and interviews	Postnatal women: 8 focus groups, 52 participants. 4 interviews. 8 pregnant women, 42 postpartum women & 2 partners.	Thematic analysis of postnatal care of women's expectations in hospital. Some alternative postnatal care packages were explored	Mothers anxious & fearful about baby safety & wanted longer hospital stays with professional help to rest with breastfeeding support. Hospital shared rooms noisy.
McLachlan, H.L, Forster, D.A. Yelland, J., Rayner J.A, Lumley,	To explore the organisation and structure of	Mixed methods study	71 Victorian hospitals surveyed	Survey data were analysed using descriptive statistics and	Standard postnatal care documentation and fixed length of hospital stay may

2008	hospital postnatal care	State-wide hospital postal survey Key informant interviews	N=38 Key-informant interviews with midwives and medical practitioner.	interview data analysed thematically.	inhibit rather than support individualised care for women.
Rayner, J.A., Forster, D., McLachlan, H., Yelland, J., Davey, M 2006 Australia	A state-wide review of hospital postnatal care and the views and experiences of Midwives	Structured & semi-structured interviews of key informants in all public hospitals in Victoria providing maternity care	N=33 key informants who provide hospital-based care.	Thematic analysis 4 emergent themes	Midwife's views & experience are in accordance with the views of women.
Rayner, J.A., McLachlan, H., Forster, D.A., Peters, L., Yelland, J. 2010 Victoria Australia	A state-wide review of all private maternity hospitals to ascertain the organisation and provision of postnatal cares in Victoria, Australia	A mixed methods study which included a structured postal survey and key informant interviews	N=19 Private Maternity Hospitals in Victoria	Pre-coded response questions were analysed using descriptive statistics. Open-ended responses were analysed using a thematic network	The median proportion of women exclusively breastfeeding on discharge was reported to be 93% (range 82 to 98%).
Passant, L. 2012 NSW Australia	An exploration of the key elements required for midwives to develop a new model of postnatal care within an acute care setting."	Literature Review	Unknown number of publications of literature from 2008-2011 U.K., Canada, U.S. Sweden & Australia.	Descriptive content analysis of focus group & interview developed themes and subthemes.	Need for more single rooms, flexibility in length of hospital stay, & no restrictions on home visiting. Need for communal spaces

<p>Kelly, M 2012 Queensland, Australia</p>	<p>Exclusive breastfeeding rates of women at discharge, three and six months postpartum prior to BFHI implementation at a tertiary facility</p>	<p>A prospective cohort study of women & infants breastfeeding starting from hospital discharge, to 3 and 6 months of infant's age.</p>	<p>Tertiary maternity hospital Queensland Australia.</p>	<p>Breastfeeding outcomes measured over 6month time frame & statistical analysis of interactions of variables affecting breastfeeding outcomes.</p>	<p>Very early postpartum period, before women leave hospital and directly afterwards, has significant impact on exclusive breastfeeding outcomes and long-term breastfeeding rates.</p>
<p>McKinnon, L. C. Prosser, S. J. Miller, Y. D. 2014 Queensland (QSD), Australia</p>	<p>To explore consumer evaluations of maternity care in Queensland</p>	<p>Retrospective self-report on-line or hard copy survey of women in QSD 2011-12</p>	<p>N=3,635 women who had a singleton live birth in 2010 Data collected from 6 areas across QSD to include differing cultural groups</p>	<p>Thematic analysis of open-ended responses from 150 women. Four themes emerged.</p>	<p>Particular unmet information needs (e.g., breastfeeding) and concerns regarding the care environment (e.g., crowding and long waiting times).</p>
<p>Zadoroznyj, M., Brodribb, W. E., Young, K., Kruske, S., Miller, Y.D., 2015 Queensland, Australia</p>	<p>To explore what mothers' say about their post-birth care</p>	<p>To identify and analyse mothers' comments about postnatal care in their free text responses to an open-ended question in the Having a Baby in</p>	<p>A survey of N=4310 mothers' experiences 4 months after birth.</p>	<p>Analysis included the coding and enumeration of issues to identify the most common problems commented on by mothers.</p>	<p>Four broad Themes: quality of care (interpersonal and technical); access to choices and involvement in decision-making; unmet information needs, and</p>

		Queensland Survey, 2010.			dissatisfaction with the care environment.
Beake S, McCourt C, Bick D. 2005 U.K.	To explore women's views of hospital and community-based postnatal care	22 In-depth semi-structured interviews	22 socially & ethnically diverse women within the hospital and community within the U.K.	Thematic analysis of interviews.	The main themes were lack of support, in both hospital & the community. Hospital environment not conducive to rest.
Beake S, Rose V, Bick DE <i>et al</i> 2010 U.K.	A qualitative study of women, clinicians & managers. This part of the study reports on the experiences and expectations of women receiving in-patient postnatal care in one English maternity unit.	Mixed methods approach, pre and post intervention study Semi-structured interviews and survey of postnatal women in Southern England	20 women interviewed to explore their views of an intervention to improve postnatal care Women and staff surveyed at 10 days and 3 months after birth as part of an intervention of revisions of care	Content analysis of the semi-structured interviews used thematic analysis after data had been coded and categorised to identify issues & concepts.	The organisation and delivery of inpatient post-natal care is rooted within the culture of a medical organisation. Lights left on for long periods. The lack of support and informational advice on baby care and breastfeeding was highlighted.
Wray, J. 2011 U.K.	An ethnographic study exploring the context of care and recovery after birth through the experiences and voices of mothers	Ethnographic study using in-depth conversational interviews with 17 women and participant observations	2 Maternity units in North west England	Thematic analysis of observational and interview data	Urgent revision of postnatal care required. Women's expectations of their health and wellbeing and

		within postnatal ward.			their needs in the early weeks and months after giving birth, differ from those who continue to adhere to traditional and ritualistic care practised by professionals
Wray J 2006 U.K.	Seeking to explore what matters to women about postnatal care in hospital and at home	Survey using purposely developed questionnaire	1000 women surveyed using open and closed questioning. 452 women responded	Statistical analysis used for closed questions and thematic analysis for open questions	Care at home more highly regarded than the postnatal ward care. All women felt unable to influence the noise levels on the wards. Conversations, televisions and the cry of babies were all overheard and there was no protection against such noises. An infringement of women's privacy and ability to rest. More flexibility needed to include fathers

Bhaskar, S., Koumousidis, A., Vause, S. 2013 U.K.	To determine what postnatal women experienced as in-patients on maternity wards regarding privacy and confidentiality.	Survey of women on postnatal wards regarding privacy and confidentiality	A BFHI accredited maternity hospital. 60 postnatal mothers surveyed using structured questionnaires over a one-week period.	Quantitative analysis of survey questions	Women said ward rounds were a time for breach of confidentiality. Four-bed bays inadequate. Single rooms and separation would give more privacy.
Dyke F, 2004 U.K.	A critical ethnographic study of encounters between midwives and breastfeeding women in postnatal wards in England.	A critical ethnographic study using participant observation and focused interviews.	Two Maternity units in Northern England. 61 postnatal women and 39 midwives.	Thematic network analysis of data	Questioned the suitability of the hospital as a place and the space within which women begin to breastfeed.
Baker, S.R., Choi, P.Y., Henshaw, C.A. & Tree, J. 2005 U.K.	'Women's Experiences of Maternity Care during Labour, Delivery and the Immediate Postpartum	Semi-structured interviews	24 primiparous and multiparous women	Transcripts analysed using open and axial coding with triangulation	Negative attitudes and behaviours of maternity staff, and issues of under-resourcing, were linked to negative feelings. Breastfeeding impacted.

Doyle A, Barry M. 2015 Ireland	To undertake a quality review of why mothers stop breastfeeding before discharge from hospital	Breastfeeding audit prior to BFHI accreditation	102 women who initiated breastfeeding over a one-month period. 22 women had weaned prior to hospital discharge	Quantitative data from computerised maternity information system used to identify women who had weaned prior to hospital discharge and why	Identified a need for more support for breastfeeding Women overnight. Extra support needed for women with infants in Special Care Nursery and operative births
Vogel, A.M., Mitchell, E.A. 1998 New Zealand	To explore the issues of importance when establishing breastfeeding	Qualitative methods Focus group discussions	Saturation sampling of mothers and health care workers 7 Focus groups held with between 2 and eleven persons per group. Total 45 participants	Focus group data analysed and developed into themes	Specific concerns included overworked staff, lack of health care workers' skills, particularly in helping infants to latch, inconsistent advice; noise and embarrassment in in 4-bedded rooms. Lack of help post C/S.
Lawal L 2020 New Zealand	To identify restorative spaces for postnatal recovery in urban tertiary hospitals	Two phased sequential explanatory mixed methods approach: online survey and focus group discussions	Nine women and five senior registered midwives participated in focus groups On-line survey	Analysis of results compared, synthesised and interpreted Exploratory factor analysis performed for the 25-item survey questionnaire	Strong evidence found on how building spaces impact recovery. Single rooms recommended for emotional support and communal areas for psychosocial support

<p>Klingaman, K. 2009 Durham U.K. Thesis</p>	<p>To record specific difficulties within the postnatal ward of women breastfeeding after a caesarean section</p>	<p>The impact of the infant side-car crib or standalone cot on breastfeeding was tested among the Phase 2 mothers by comparison of 35 overnight postnatal ward video recordings. study design semi-structured interviews</p>	<p>N=75 breastfeeding women post C/S interviewed & compared with 51 women who had elective non labour C/S, & given intervention side-cots.</p>	<p>Descriptive statistical analysis on participants' accounts of the addressed topics</p>	<p>The peak mother-infant breastfeeding conflict was night-time, after visiting hours. Midwifery and maternal concerns over the mothers' lack of sleep prompted formula supplementation.</p>
<p>Grassley, J.S., Clark, M., Schleis, J. 2015 U.S.A.</p>	<p>An Institutional Ethnography of Nurses' Support of Breastfeeding on the Night Shift</p>	<p>Ethnographic study using data collected via one focus group interview and observations</p>	<p>Focus Group N= 5 nurses Interviews (N=16 with registered nurses on night shift who provided mother/infant care immediate post-partum)</p>	<p>Qualitative content analysis of the categories and themes within the data produced a rich description of the breastfeeding support these nurses provided on the night shift</p>	<p>3 themes: competing priorities, incongruent expectations, & influential institutional structures.</p>
<p>PA Janssen, SJ Harris, J Soolsma, MC Klein 2001 Canada</p>	<p>To determine staff perspectives of single room postnatal care</p>	<p>Pre-post study prior to and following move from traditional to single room postnatal care</p>	<p>Staff survey in 7-single room maternity facility 6 months prior to move and 3 months after move</p>		<p>Staff more satisfied as able to better respond to women's needs; increased opportunities to 'teach' the families;</p>

					privacy and confidentiality improved. Rated satisfaction higher in single room than traditional settings.
PA Janssen, MC Klein, SJ Harris, J Soolsma, L C Seymour Canada 2001	Women's satisfaction with single room postnatal care	Satisfaction survey of 205 low risk women who were admitted to a single room and compared with the responses of those of a traditional hospital comparison group of 221 women meeting the same eligibility criteria			Significant improvement in women's satisfaction because of the physical setting itself, avoidance of transfers, and improved continuity of care.
E Kurth, E Spichiger, EZ Stutz, Biedermann J., Hösli, I. & Kennedy, H.P. 2010 Switzerland	An exploration of how new mothers experience and handle postnatal infant crying and their own tiredness in the context of changing hospital	Interpretive phenomenological Study Data collected via Interviews	Purposeful sampling of 15 mother baby pairs of diverse parity, interviewed during hospital stay then at 6 and	Thematic analysis and a comparison of issues noted across the field notes and in the accounts of different participants, identified commonalities and differences and discerned reoccurring patterns.	Getting adequate rest was difficult for mothers striving to provide infant-centred care if infant unsettled. These mothers suffered from sleep deprivation

	care practices in Switzerland.		12 weeks postpartum. BFHI accredited Maternity Hospital		unless supported by hospital staff
M Eberhard-Gran , A Eskild, S Opjordsmoen, B Schei 2000 Norway	Aimed to examine the degree of satisfaction women had with the maternity unit postnatal stay and whether women had sufficient sleep and rest.	Postnatal Survey Abstract only, full article in Norwegian	160 postnatal women surveyed during a 9 month period in 1998	Quantitative analysis of survey results	47% (75/160) of the women reported lack of sleep and rest in the maternity unit. The factor most strongly associated with lack of sleep and rest was not having a single room
Hildingsson, I. Thomas, J. Olofsson, R. E. Nystedt, A. Hildingsson, I. Thomas, J. Sweden 2009	To determine Swedish fathers' satisfaction with postnatal care	Survey of fathers during a 15 weeks period in 2004 and 2006	640 fathers of two cohorts of live born babies: 284 born in 2004 356 born in 2006. A Swedish hospital: postnatal care options were traditional postnatal ward, early discharge, co-care at neonatal ward, and from 2006 a	Descriptive statistics - odds ratios with 95% confidence interval	There was no improvement in satisfaction with the content of postnatal care, within the 2 years although fathers who stayed in the family suite on the hotel ward were more satisfied with the postnatal care over all

			family suite on a hotel ward.		
Hildingsson I. 2007 Sweden	This study was to gain an understanding of new parents' satisfaction with postnatal care and to estimate the proportion of fathers who were given the option of spending the night at the postnatal ward.	Survey of new parents 6 months after the birth of the child	491 eligible women surveyed. 294 women respondents. (60%) and 280 new fathers completed the questionnaire,	Two step quantitative multivariate analysis.	Staff working in postnatal care must become aware of the needs of the new family and improve patient—staff interactions such as support and assistance to new parents in order to enhance patient satisfaction. Family orientated, postnatal care is essential to give fathers the opportunity to stay and participate in newborn care
Ellberg, L. Högberg, U. Lindh, V. 2010 Sweden	This study describes how new parents experience postpartum care.	Cross-sectional, population-based study, based on questionnaires.	1474 New Parent Couples	The data were analysed with descriptive statistics and content analysis.	Parents, irrespective of gender, should have equal opportunities as parents during postpartum care as parenting is a joint project.
M Hakala, P Kaakinen, M Kaariaainen, R Bloigu, L Hannula, S Elo	Implementation of Step 7 of the Baby-Friendly Hospital	A cross-sectional study using data collected via survey	Questionnaires were used to collect data from n=111 mothers who had given	The data were analysed using descriptive statistics, as well as chi-squared, t-test, and Fisher, Mann-Whitney,	Rooming-in should be used more with infants born by caesarean section and primiparous mothers.

2018 Finland	Initiative (BFHI) in Finland: Rooming-in according to mothers and maternity-ward staff		birth; and the attending maternity ward staff (n=1554) at 8 Finnish Maternity Hospitals	Kruskal-Wallis tests. Answers to the open-ended questions were analysed using content specifications.	The need for supplementation increased when rooming in was not employed.
Valbo, Iversen and Kristoffersen 2011 Norway	Postpartum care: evaluation and experience among care providers and care receivers	Cohort study with data collected via survey of staff and postnatal women	Survey of 682 women giving birth and 49 caregiving staff in the maternity ward during a 7-month period. Maternity hospital 2600 births p.a.	Quantitative exploratory factor analysis	2 areas needing further focus: assistance with child-care during the night and teaching of child-care skills during the stay.
YL Lai, CH Hung, J Stocker, TF Chan, Y Liu 2015 Southern Taiwan	Postpartum fatigue, baby-care activities, and maternal–infant attachment of women with vaginal and caesarean births following rooming-in	A descriptive cross-sectional study design using a structured questionnaire	120 Women interviewed 2-3 days postpartum. 60 NVB 60 C/S 3 structured self-reported questionnaires measuring postpartum fatigue, difficulty in baby-care activities and a maternal infant attachment inventory.	Quantitative Co-variance data analysis using Statistics Package for Social Science (SPSS) 12.0 for Windows	Higher postpartum fatigue scores were correlated with greater difficulty in baby-care activities, which in turn resulted in weaker maternal–infant attachment as measured in the first 2 to 3 days postpartum. Conclusions: Hospitals should implement

			2 BFHI accredited maternity hospitals		rooming-in in a more flexible way
S Adatia, S Law, J Haggerty USA & Canada 2014	Room for improvement: noise on a maternity ward	Opinion piece on the impact of noise within the postnatal hospital setting.	Maternity	This paper provides recommendations on how to reduce the noise levels, or at least control the noise on a maternity ward, through the implementation of a daily quiet time.	Noise and disruptions are a significant problem during postpartum hospital stay. Sleep deprivation is associated with a number of negative mental and physical health consequences
R Waller-Wise, B L Maddox USA 2014	The investigators conducted a study to determine if instituting an after-noon quiet time would improve women's satisfaction and breastfeeding success, promote rest, and improve infant parent bonding at a community hospital in the	Before and after study of a quiet time postnatal ward intervention.	Follow-up phone calls of 64 post-partum women, questions designed to identify women's experiences specific to the rest they receive, their breastfeeding experiences, and bonding opportunities, before and after instituting a 2-	The study is a nonexperimental, descriptive, comparative design used to measure pre-intervention and post-intervention perceptions of participants.	There was not a significant difference in "having adequate time to get to know your baby", "bonding in the hospital", "having enough time to rest during the hospital stay", between the pre-quiet time and post-quiet time intervention. There was a significant difference in "perception of

	south eastern United States.		hour quiet time on the unit.		interruptions by hospital personnel”.
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Appendix D: Images

Images of the artefacts of postnatal care environment



Image 1: Main corridor leading away from reception to shared rooms and single rooms. Red arrow indicates no door on shared rooms; blue arrows indicate single rooms opposite shared room entry point. Yellow arrow indicates toilets and showers for women located at end of corridor.



Image 2: Demonstrates corridor, with black arrow displaying entry point leading to shower and toilet from entry point of shared room (red arrow). Separate hand basin outside door of shared room (there are none inside the room). Frosted windows either side of shared room entry point.



Image 3: View of central corridor looking into ward reception area. Arrow demonstrates frosted windows either side of four-bed room entrance (without door) which allows light and noise into room from busy corridor.



Image 4 Shared room demonstrating curtains partially opened, allowing view of the window and natural lighting. Overhead lights are off and blue arrow demonstrates patient bed light.



Image 5: Shared room separated by curtains that are closed around each woman's bed.



Image 6: Shared room artefacts: electric bed with adjustable bed head, infant caesarean section cot, locker and 3 drawers. Over-bed table, 1 chair and footrest, curtains separating beds, and mother breastfeeding in chair. Blue arrow demonstrates caesarean section cot with side folded out onto mother's bed to allow easy access to infant.



Image 7: Shared room indicating women's notes located on wall between curtains. A narrow corridor between the beds is created when the curtains are closed. Light above notes can be left on during night.



Image 8: Mother sleeping while father cares for infant in shared room. Blind drawn to make dark enough to sleep. Perspex infant cot.

(Media consent signed)



Image 9: Visitor chair in shared room



Image 10: Single room and en suite. Blue arrow demonstrates close proximity of shower and toilet to mother's bed. Red arrow indicates special infant cot for women with restricted mobility. Cot can be lowered or raised to bed height and the side folds out onto mother's bed.



Image 11: Fold-out bed/armchair in single room for partner to remain overnight



Image 12: Father passing infant to partner in readiness to breastfeed in single room following emergency caesarean section. (Media consent signed)



Image 13: Partner in single room having skin-to-skin while sitting on fold-out armchair/bed (Media consent signed)



**Image 14. Partner asleep on fold-out bed in single room
(Media consent signed)**



Image 15: Single room – partner making a nest and soothing the baby while mother sleeps (Media consent signed)



Image 16: Common room used for education, storage of equipment, infant examination, and resuscitation.



Image 17: Another view of common room looking out into central corridor and reception area. Used for storage of breast pumps. Infant weighing scales and change table. Sinks for washing equipment and refrigerators for storage of breast milk.



Image 18: Grandparents baby-sitting in common room during afternoon visiting hours while mother sleeps in her shared room. (Media consent signed)

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