Curtin School of Nursing

Exploring the Experiences of Breastfeeding Women Whose Partners are Fly-in, Fly-out in Perth Western Australia

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number #RDHS-15-15.

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Abstract

A large natural resources sector and expansive geography mean that Western Australia employs over 100,000 workers in a fly-in, fly-out (FIFO) model. FIFO is necessary when the worksite is too far from the workers' residence for a daily commute and entails the worker moving to the worksite for the duration of their roster, returning home upon completion. This is a cyclical lifestyle which engenders specific challenges for those living it. Workforce estimates indicate that the majority of FIFO workers are in a relationship and/or have children, and that the remuneration attracts many young families. Successful breastfeeding is demonstrated to have health benefits for both the mother and baby, however to date, there has been a lack of research into the impact of the FIFO lifestyle on breastfeeding.

This descriptive exploratory study aimed to gain insight into the experiences of women who were breastfeeding whilst their partner worked a FIFO roster. Semi-structured interviews were conducted with 10 women matching this criteria, and thematic data analysis was used to generate the study's qualitative findings. In explaining their experience women described similar breastfeeding challenges to the non-FIFO population. However, they also highlighted lifestyle challenges associated with FIFO such as altered family responsibilities and dealing with family emergencies whilst the FIFO worker is away, missing their partner whilst on 'swing', as well as that FIFO was often considered an enabler to breastfeeding by these women On the whole they prioritised the benefits of both breastfeeding and the FIFO work arrangement for their family. Participants demonstrated self-efficacy and resilience in both these aspects of their lives, describing a commitment to breastfeeding and a willingness to seek appropriate resources and be self-sufficient as the stay-at-home partner and with their breastfeeding. These attributes suggest a strengths-based, person-centred approach would be of most use when determining supports for these families to continue breastfeeding.

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We acknowledge that Curtin University works across hundreds of traditional lands and custodial groups in Australia, and with First Nations people around the globe. We wish to pay our deepest respects to their ancestors and members of their communities, past, present, and to their emerging leaders. Our passion and commitment to work with all Australians and peoples from across the world, including our First Nations peoples are at the core of the work we do, reflective of our institutions' values and commitment to our role as leaders in the Reconciliation space in Australia.

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Chapter 1 - Introduction

Western Australia (WA) is a resource rich state, with a healthy mining and resources industry that attracts and employs workers by the thousands. Despite difficulties obtaining accurate numbers of fly-in, fly-out (FIFO) workers, the Chamber of Minerals and Energy Western Australia (CMEWA) state that the resource sector employment in WA had grown "by approximately 75%" from 2006-07 to 2016-17, with 106, 502 workers employed on site (CMEWA, 2018, p. 20). Additionally, the AMMA Australian Resources and Energy Group (Australian Mines and Metals Association [AMMA], 2018) has identified that although technological advances indicate a trend that will reduce the number of workers on site at resource projects, employing FIFO workers as part of standard practice will remain into the future.

The impact of the FIFO lifestyle on both workers and their families is well demonstrated, both anecdotally (Mackander, 2016) and in the growing body of literature devoted to better understanding and mitigating negative impacts of this employment practice (Colquhoun et al., 2016; Langdon et al., 2016; Legislative Assembly Education and Health Standing Committee [EHSC], 2014). The health and wellbeing of the worker impacts on the health and wellbeing of their family. Given the numbers of FIFO workers as those identified in WA, fostering a healthy FIFO workforce is a vital public health issue and warrants attention and a sustainable approach to build healthy communities.

FIFO is not a new phenomenon, with Carrington and Pereira (2011) noting that FIFO employment began in the 1970s. Over recent years it has garnered more attention, with private and government bodies recognising the need to ensure the safety and wellbeing of FIFO workers and their families. To date, much of this research has been focused on the mental health implications of the FIFO lifestyle, with two Government inquiries being held over the last nine years (EHSC, 2015; House of Representatives Standing Committee on Regional Australia [SCRA], 2013). It is heartening to see this increased awareness of the needs of FIFO workers and the associated impacts of the lifestyle on the workers and their families. However, despite the lens of FIFO scrutiny being widened

to include the impacts on partners and families (Bradbury, 2011; Clifford, 2009; Cooke et al., 2019; Lester et al., 2016), these studies have focused on relationships, partners, and older children (school age). Although some literature has acknowledged that the needs of families may differ according to their age and composition (Misan & Rudnik, 2015; Sibbel & Kaczmarek, 2005; Torkington et al., 2011), this has usually been an incidental finding and early parenting in general has received little attention. The importance of parenting in the early years is well established, with breastfeeding being integral to lifelong health and wellbeing (Moore et al., 2017). Notwithstanding, there is an absence of research on the impacts of the FIFO lifestyle on breastfeeding.

FIFO employment entails lifestyles that are likely to place unique and specific stressors on families in the earliest years of parenting. The importance of breastfeeding in infant nutrition, family bonding and life-long wellness is indisputable, and Australia has a targeted Strategy to support breastfeeding in the general population (Council of Australian Governments [COAG], 2019). This study aimed to explore the unique experiences of breastfeeding women whose partners were employed in a FIFO capacity. Interviews held with these women provided real and valuable insights into this unique phenomenon. Knowledge gained will inform future research as well as provide discussion of implications for nursing and midwifery practice and recommendations based on the findings, for how to best support families to breastfeed while maintaining FIFO employment.

1.1 Background

1.1.1 Fly-in, Fly-out in Western Australia

In 2019, the Western Australian mining industry employed 133, 094 people, the highest recorded number of employees to date (WA Department of Mines, Industry Regulation and Safety [DMIRS], 2019b). As mentioned, the CMEWA (2018) and the Australian Bureau of Statistics (ABS) (2014) note the difficulty in determining exact figures of the FIFO population but derive a picture of this workforce from Census data, which indicates large discrepancies between usual place of residence and place of employment. According to the CMEWA (2018), in 2016-17 the Western

Australian resources sector employed 118, 423 people, with 106, 502 employed on-site. This number included full and part-time employees, as well as contractors. With over 50% of these workers being employed in the Pilbara region alone (CMEWA, 2018), it can be seen that a large number of this workforce is employed in a FIFO capacity, indicated by the residential population of the area being 61 657 in total (ABS, 2019a). Although the mining 'boom' officially ended in WA in 2013 (Productivity Commission, 2017), the mining sector remains a major source of employment in WA, employing an estimated 7- 8% of the workforce (CMEWA, 2018). It is also anticipated by the government of WA to be an area of continuing area of large employment as a part of the post-pandemic recovery (State Government of Western Australia, 2020).

The stages of mining can be identified as exploration, mine-site design and planning, construction, production, and closure and reclamation (Mining Global, 2015). The resources sector is linked intimately with these phases, resulting in the cyclical nature of the industry. It is important to note this, as it often results in a change in the number and composition of FIFO workers due to the changing requirements of skills according to the stage of the project. Due to the cyclical demands of the mining industry (Productivity Commission, 2017), it can be postulated that when new construction phases are entered into the number of employees can be expected to rise again. The CMEWA project a future "modest growth" of the resources sector workforce in WA (CMEWA, 2018, p. 2). It is worth noting that despite the downtrend in employment during the COVID-19 pandemic, the State Government of WA (2020) has identified mining as one of the least affected industries. Additionally, the increased focus on building and supporting infrastructure and industries within WA as a part of the WA Recovery Plan post-pandemic may reasonably present more FIFO roles as new construction and exploration jobs are created (WA Department of Premier and Cabinet, 2020). This research study has focused on the mining and resources sector as this is the largest employer of FIFO workers, and the long-term FIFO approach entails a cyclical leave and return to home that is quite unique.

Given the lack of data on FIFO workers, as evidenced by the difficulty estimating numbers, it is also difficult to determine the demographics of this population. A survey of 2,500 FIFO workers undertaken by the CMEWA (n.d.) indicated that around 86% of respondents were in a relationship and approximately 65% had children. These results are comparative to an online survey of 800 participants by FIFO Families and Creating Communities (2014), which identified that the majority of respondents were living with a partner and children (70%), and 89% were in a relationship, whilst 4% of respondents indicated that their children were no longer living at home. Despite the inherent difficulties with gaining an accurate number, it can be seen that there are significant numbers of families in WA who have one parent/partner who is frequently away from home due to employment, or who may not currently fall in the category of having children but will move to this category in the future. The relatively short periods of time away and the cyclical nature of leaving and returning with such frequency mean that this population is unique even from other families with employment related separation such as the military, which usually entail a longer period with organisational support and resources (see https://www.defence.gov.au/DCO/Militarylife/deployment/default.asp).

It is difficult to illustrate a general representation of work requirements and patterns for FIFO employees. As mentioned, the varying stages of the mining industry cycle mean that there are different workers employed for different roles at any given time. The general nature of FIFO work, however, is characterised by a 'swing' onsite and away from home for the duration of the roster, followed by time off back at the usual place of residence (home). FIFO is also sometimes known as "long distance commuting" [LDC] (Misan & Rudnik, 2015) or "non-residential work practices" (Dittman et al., 2016), and may also incorporate "drive-in, drive-out" (DIDO) or "bus-in, bus-out" (BIBO) arrangements (CMEWA, 2018; Misan & Rudnik, 2015). Workers are generally employed for 10-12 hour shifts each day of the roster, and travel time is often incorporated into days off (CMEWA,

2018; Dittman et al., 2016). Consecutive shifts followed by periods of time off are known as "compressed" rosters, with more days on in a row being identified as more compressed (Dittman et al., 2016). Rosters depend on the individual company and job but can include options such as eight days on (-site) and six days off, two weeks on and two weeks off, or variations of similar with up to six weeks on and one week off being mentioned (Bowers et al., 2018; CMEWA, 2018; Dittman et al., 2016).

The difficulties cited with resourcing and attracting people to live in regional and rural towns has ensured that FIFO remains a valid and viable option for many employees and employers (CMEWA, 2018), particularly as this phenomenon allows the families of the workers to continue to access resources and services in larger towns or the metropolitan area (Productivity Commission, 2017; SCRA, 2013). This is likely to be a consideration for many FIFO employees with families, who may choose FIFO to enable their family to be close to desired schools and extended family, in preference to moving to a regional area. For these reasons, FIFO is demonstrated as a firmly established model for mining companies.

1.1.2 The Effects of FIFO Employment

There is currently an emerging but limited amount of research published that examines the FIFO lifestyle and its potential impact on the health and well-being of both the worker and their family. In 2011, the Australian Government held an inquiry into the FIFO and DIDO work practices in regional Australia and in 2013 released 21 recommendations around this workforce. The recommendations specific to this study are:

> Recommendation 9 – The Committee recommends that the Commonwealth Government develop a best practice guide for employers with significant non-resident workforces aimed at assisting them to develop family support programs.

> Recommendation 10 – The Committee recommends that the Commonwealth Government commission research on the effect on children and family relationships of having a long-term fly-in, fly-out/ drive-in, drive-out parent (SCRA, 2013, p. xx).

The literature surrounding FIFO workers and their lifestyles and the impact on families or partners is small but has grown in recent years. Regarding individual effects, workers have reported both positive and negative effects (Bowers et al., 2018; Torkington et al., 2011). Positive effects identified include financial benefits and job satisfaction (Misan & Rudnik, 2015; Torkington et al., 2011) as well as families valuing the time that the worker is home, as family time is not impinged upon by work commitments (Bradbury, 2011; Gallegos, 2005; Henry et al., 2013; Lester et al., 2015; McPhedran & De Leo, 2014; Misan & Rudnik, 2015; Torkington et al., 2011). However, despite some evidence to the contrary (Clifford, 2009; Dittman et al., 2016; Sibbel, 2010), FIFO work is widely reported to increase stress on workers (Bowers et al., 2018), partners (Cooke et al., 2019; Gallegos, 2005; Kaczmarek & Sibbel, 2008; Torkington et al., 2011) and families with children (Gallegos, 2005; Kaczmarek & Sibbel, 2008; Taylor & Simmonds, 2009; Torkington et al., 2011). Workers and families have reported increased psychological stress (Cooke et al., 2019; Misan & Rudnik, 2015), emotional problems (workers and partners) (Dittman et al., 2016) and issues related to family functioning such as difficulty with transition when the partner flies in or out, and harsher child discipline practices (Dittman et al., 2016). Studies have also identified increased alcohol use or experience of a "drinking culture" for FIFO workers (Meredith et al., 2014), as well as a culture of bullying (Miller et al., 2019). Recognising these stresses, organisations such as Mining Family Matters (www.miningfm.com.au) and FIFO Families (www.fifiofamilies.com.au) exist to support FIFO families. Further detail on current literature surrounding the positive and negative effects of FIFO is provided in Chapter 2.

Despite the growing body of knowledge regarding the impacts of FIFO on workers, partners, and families, one area that is currently under reported is that of the impacts of FIFO on breastfeeding. Given that breastfeeding is recognised as a public health priority (COAG, 2019) and

this period of parenting entails unique and specific challenges, it is an area that merits further exploration and understanding.

1.1.3 The Benefits of Breastfeeding

The health benefits of breastfeeding are widely acknowledged, with breast milk being recommended exclusively as the perfect nutrition for babies up to six months of age, with breastfeeding and "safe and adequate complementary foods" to be continued until or beyond two years of age where possible (World Health Organisation [WHO], 2020). As well as providing this nutrition, breast milk has well documented health benefits to babies and children (COAG, 2019; Victora et al., 2016; WHO, 2014). Such health benefits include but are not limited to; decreased incidences of infectious gastro-intestinal illness, respiratory tract infections and otitis media, obesity, diabetes, (COAG, 2019; Victora et al., 2016) asthma and atopic diseases, and leukaemia (COAG, 2019). Breastfeeding has also demonstrated benefits for mothers including a lowered risk of cardiovascular disease, type 2 diabetes, depression and some reproductive cancers (COAG, 2019; Victora et al., 2016), a substantial impact in the face of the ever-increasing incidence of chronic disease. There is substantial evidence of adverse health and economic consequences related to artificial feeding (Baker et al., 2020). For these reasons, as well as the economic benefits of reduced burden of disease on the health care system and the sustainability of breastfeeding (both to the environment and individual families), the Australian Government is committed to promoting and protecting breastfeeding (Australian Government Department of Health, 2019). Despite this, current breastfeeding rates in Australia are well below the established targets, with only 29% of children between six months and three years of age having been exclusively breastfed to six months of age (ABS, 2019b). In WA the rates are lower, with 64.9% of babies being exclusively and 63.4% predominantly breastfed by one month old, and 12.3% exclusively and 24.6% predominantly breastfed by six months (Powell et al., 2017, p. 33). These declining figures highlight the importance of understanding the breastfeeding experience for WA families.

Choosing to breastfeed and continuing to breastfeed after initiation is not always an easy process however, with many factors influencing the ability of the mother and baby to continue. In their seminal literature review conducted into the factors that positively affect breastfeeding duration to six months, the seminal work by Meedya et al. (2010) identified three that are potentially modifiable: the woman's breastfeeding intention, self-efficacy, and social support. These elements are consistent throughout the literature and focusing on those that are modifiable, with empathy and an informed understanding of the unique circumstances that FIFO families face, is likely to be a practical and significant approach to supporting FIFO families to continue to breastfeed. More detailed information on breastfeeding is provided in Chapter 2.

1.2 Research Problem

Researchers are beginning to understand and explore the unique circumstances of FIFO families (Dittman et al., 2016; Meredith et al., 2014). Some progress has been made toward systemic regulation of the practice, with the WA Department of Mines Industry Regulation and Safety publishing the *Mentally Healthy Workplaces for Fly-In Fly-Out (FIFO) Workers in the Resources and Constructions Sectors: Code of Practice* in 2019 (DMIRS, 2019a). Unfortunately, the lack of information into supporting families in the early years of parenting, and specifically surrounding initiating and maintaining breastfeeding, means that the healthcare system is not positioned to provide evidence-based, tailored support for FIFO families. Currently the impact of the FIFO lifestyle on breastfeeding is unknown, and therefore policies and resource planning are not able to reliably cater to this population. Tailored and informed advice and assistance for FIFO families surrounding breastfeeding is at the discretion and experience of the individual health practitioner, and this circumstance does not provide an equitable platform for these families, nor a source of professional development for the health practitioners working with them. It was therefore important to understand the breastfeeding experiences of women whose partners are employed within a FIFO work arrangement.

1.3 Aim and Objectives

This study focused specifically on the breastfeeding experiences of women whose partners were working a FIFO roster. More specifically, the study targeted the experience of those who were currently breastfeeding, and not those planning to breastfeed, as the initiation rates of breastfeeding in Australia are very high, although these rates are not maintained (ABS, 2019b). The aim of the study was to identify, from their perspective, the enablers and barriers to the continuation of breastfeeding. The study achieved this by gathering data that:

1. Identified and explored the experiences of breastfeeding women with FIFO partners;
2. Identified, from the women's perspectives, the enablers and barriers with regard to the continuation of breastfeeding;
3. Described the current support utilised and potential means of support acceptable to participants to ensure that they continued breastfeeding according to the Australian Government and World Health Organisation recommendations.

1.4 Study Significance

Despite an established body of evidence surrounding the factors that influence the initiation and maintenance of breastfeeding (Balogun et al., 2016; McFadden et al., 2017; Meedya et al., 2010) COAG, 2019; a paucity of literature on the topic of breastfeeding while living a FIFO lifestyle, could potentially put this population at risk. The lack of knowledge in this area means that these families may slip through the net of the current strategies and programs in place which encourage and protect breastfeeding. The need for this study was underpinned by the acknowledged imperative for further research to be conducted into the area of FIFO and its impacts on families (SCRA, 2013), as well as the current rates of breastfeeding in WA, which fall well below the national and international targets (COAG, 2019; WHO, 2020).

In addition to aligning with the Australian National Breastfeeding Strategy (ANBS) (COAG, 2019) and WHO (2014) targets for increasing breastfeeding rates, the objectives of this study aligned with the recommendations published by the government inquiry into FIFO practices in 2013, specifically Recommendations 9 and 10 as discussed earlier (SCRA, 2013). Further, this study aligned with Recommendation 8 of the WA Sustainable Health Review:

> Recommendation 8 – Health actively partner in a whole-of-government approach to supporting children and families in getting the best start in life to become physically and mentally healthy adults.
>
> … Efforts during the first 1,000 days of life provide the best opportunity to address risks related to chronic disease, including obesity, passive smoking, alcohol consumption and mental health (Sustainable Health Review, 2019, p. 69).

The major outcome of this study is a better understanding of the unique experiences, needs and supports that can be offered to this population. Aligning this expanded understanding and knowledge with the current literature on factors affecting FIFO families, as well as with initiatives already in place to support and protect breastfeeding, will enable positive change and increased equity in the delivery of breastfeeding support to FIFO families. In particular, the results will inform strategies to assist FIFO families to meet national and international breastfeeding targets, such as education of healthcare providers about this population and improved service delivery that acknowledges challenges they may encounter, as well as positive strategies likely to be helpful and acceptable to FIFO families. Appropriate support and increased breastfeeding continuation will confer nutritional and psychological benefits associated with breastfeeding to the mothers and babies in these families.

This study has produced original research into the experiences of breastfeeding women with FIFO partners with a view to informing future studies. Recommendations have been put forward

which will inform government and non-government health and public policy in relation to breastfeeding supports for women who have partners employed within a FIFO arrangement.

1.5 Researcher Positionality

As discussed by Dean et al. (2017), the nature of qualitative research is such that one researcher may interpret data and results differently to another. In acknowledging this phenomenon, it is important to discuss my own background and positionality as it relates to this study, to ensure transparency and rigor in the processes associated with conducting this study and its findings.

I first had the idea that a FIFO lifestyle could have an impact upon breastfeeding when I had my first child. I was already qualified as a Registered Nurse and Midwife (although still a novice graduate midwife) and had my son six weeks after a friend and neighbour had her first child. We would often walk together and keep each other company during the long days of new motherhood. I began to notice after my own son was born that while I had challenges – she did too… and hers were framed in a whole different lifestyle than my own. Her partner worked a FIFO roster, and had done from the start of their relationship. Whilst my friend and her partner had planned for and managed the new parenting well, I could see that it posed unique challenges for her (and I assume him also) that I did not face – such as being up all night with an unsettled baby and then having to attend child health appointments all on her own. Her child, as did mine, had feeding challenges, and this often entailed additional appointments to the child health nurse or the GP, for support and assistance. However, my husband was able to come to appointments with me if I needed or take a day off work if I was unwell, whereas she did not have that option. Her strength and determination inspired me, and as a nurse and midwife, I wanted to ensure that we as healthcare providers would have the knowledge, and importantly the understanding, to support FIFO families at this time. It was not something that had previously been a part of my work, as I worked on a maternity ward and did not have contact with the women once they left the hospital.

Therefore, as I began looking into this topic, I expected to find similar challenges to those faced by my friend. As a breastfeeding mother of two sons when I began this project, I had enough experience to know that each child is very different, and as a midwife with her eyes opened to the realities of FIFO life, I was more observant of these families when I identified them in my care and understood that FIFO parents have their own unique circumstances and motivations for their families. I entered this research topic with this same empathy and desire to better understand the experience of these mothers' breastfeeding while their partner works a FIFO roster. Throughout the course of conducting this study, my eyes have been opened further. I have a deeper respect for the challenges and strengths of these families, borne of a better understanding of their circumstances and motivation for living a FIFO lifestyle. Although I had anticipated to find specific challenges based on my personal observations of my friend's experiences, in many instances these did not eventuate, and it has been an important learning opportunity for me as a nurse, midwife, and researcher. I am grateful for my supervision team, who have been able to provide guidance on the design, implementation, and analysis of my study all the way through, assisting me to identify assumptions and separate my own views from those of the women who participated in this study. The findings, so very different to what I expected when I started this journey, are a testament to this careful journey and the rigour that has been embedded throughout. It has been an honour to be allowed into the homes of these women and their families, and I am confident that this research has a valuable place in supporting women and their families to breastfeed in the context of a FIFO lifestyle.

1.6 Definition of Terms

The following terms have been defined for the purposes of the study, as they are used in several contexts across the literature and in common use outside of academia.

Breastfeeding – where the infant is receiving breast milk, with or without any other food or fluid including formula or non-human milk, as per the WHO guidelines (2008). This has been chosen

to most accurately reflect the breastfeeding population in Australia as the percentage of women exclusively breastfeeding remains relatively low, at 29% by 6 months of age (ABS, 2019b).

Fly-in, fly-out (FIFO) - FIFO does not always refer only to people who commute to their workplace via air. The ABS (2014) identify FIFO as "circumstances of work where the place of work is sufficiently isolated from the worker's place of residence to make daily commute impractical". The Minerals Council of Australia (n.d.) states that the term "means that workers are brought to site for the length of their work roster where they are provided with accommodation, recreation facilities, meals, etc." (para 1.). This may also include drive-in, drive-out (DIDO), bus-in, bus-out (BIBO), or any other term where the worker leaves their usual place of residence for the period of their work roster. For the purposes of this study, the term FIFO encompassed all these variations in commuting.

Partner – For clarity, the term "partner" will be used in reference to the partner of the FIFO worker (in this study it was the partner who lived in the metropolitan area and was always female).

Resource – The term resource has been used broadly to refer to information or programs that would be utilised or developed to encourage and enable breastfeeding in FIFO families.

Support – Often throughout this thesis, the terms "support" and "social support" have been used interchangeably. This is due in large part to the findings indicating that participants themselves did not differentiate between them, and this will be discussed in Chapter 4. If a specific type of support is being discussed (such as practical support) it will be identified as such.

Worker – Throughout this paper, the term "worker" will refer to the person who is employed in a FIFO capacity.

1.7 Thesis Organisation

This thesis is comprised of five chapters. This first chapter of the thesis has provided an overview of the landscape of FIFO in WA, as well as outlined the topic to be explored, identifying

current gaps in knowledge, and presenting the need for the study. The research problem has been stated and the aim and objectives of the study identified. Chapter 2 will provide a more in-depth literature review, examining our current knowledge surrounding FIFO workers, their families, and children, as well as providing literature on relevant aspects of breastfeeding to the topic under study. Chapter 3 will outline the methodology of the study, providing a description of the approach and methods taken to complete the study, and a rationale for each aspect. The final two chapters will provide the results and conclusions of the study and address the aim and objectives of the research to answer the research problem identified in Chapter 1. Chapter 4 will provide an in-depth summary of the study findings, and Chapter 5 will combine these with current, relevant literature, to present the study's contribution to the field, and provide recommendations to best support families who are breastfeeding whilst working a FIFO lifestyle.

1.8 Conclusion

FIFO employment numbers remain significant in WA, and industry projections expect this trend to continue as an important and enduring model of employment. The number of FIFO workers with families and young children is difficult to ascertain, however best estimates place it as above 50% of the FIFO population. A FIFO lifestyle has acknowledged impacts on the health and wellbeing of the worker and family, however despite this, the impacts of FIFO employment on breastfeeding mothers has yet to be addressed. With lower than target breastfeeding rates already in the general population, this issue warrants further investigation. This study aimed to address this vital concern by producing original research into the experiences, supports, and challenges faced by breastfeeding women with FIFO partners. Chapter 2 will provide a more in-depth exploration of the literature to date in the area of fly-in, fly-out employment and its impact on workers and their families, as well as breastfeeding topics pertinent to this research.

Chapter 2 - Literature Review

The purpose of this research was to explore the experiences of breastfeeding for women whose partners work a fly-in, fly-out (FIFO) roster, and from this to identify enablers and barriers to breastfeeding continuation in this group. It became evident early in the process of searching the literature that there was a notable lack of research in this area. Having established that FIFO will continue to be an integral part of the resources industry in Australia (CMEWA, 2018), it became important to further explore the experiences of this population in order to ascertain the needs and current supports of women who are breastfeeding whilst their partner is employed in a FIFO capacity.

Chapter one focussed on building a picture of the FIFO lifestyle and its place in WA, now and in the future. Additionally, data was presented on the current rates of breastfeeding in Australia and WA, demonstrating that these rates continue to fall well below public health targets. Chapter one identified that there is an intersect between these two groups (FIFO families and breastfeeding families) and that our current knowledge in this area is lacking. The literature review in this chapter will expand on that which was presented in chapter one and produce an overview of relevant research to date on the FIFO experience. Following on from this, an overview of the modifiable factors associated with breastfeeding continuation will be briefly provided. By illustrating what is known about FIFO in Australia and the factors that influence breastfeeding continuation, the reader will be presented with a picture of the current landscape in this area, and knowledge gaps will become apparent.

2.1 Literature Search

A literature review was conducted using databases via the Curtin library. Scopus, ProQuest, and the Maternity & Infant Care databases were searched for literature focused on breastfeeding, using combinations of the search terms breastfeeding, infant feeding, factors, continuation, success,

duration, self-efficacy, confidence, and support. Boolean adaptors were used to refine the search and widen the search net by providing several combinations of search terms (such as breastfeeding AND self-efficacy OR confidence). Articles were limited to full text and in the English language. The search terms were used as key words, and the title and abstract were reviewed by the researcher to determine relevance to the topic under review. Reference lists of selected articles were also reviewed for appropriate literature, and Google Scholar was used to capture literature that may have been particularly relevant but not located within the databases used.

Searching the literature for FIFO specific research was decidedly more niche. The search terms fly-in, fly-out, FIFO, drive-in, drive-out and DIDO were used. Further search terms were included based on the literature that presented including long distance commut*, LDC, and non-resident work. The Curtin library catalogue and Google scholar were utilised to expand the search beyond the health-focused databases. Reference list searching was also undertaken, as was searching via Google search engine in order to identify relevant grey literature on this topic.

When conducting the literature search, a small number of studies appeared which were conducted outside of Australia (such as families with a worker in the oil rigging industry in Britain). Abstract review (or review of the article, where an abstract was not available) resulted in these studies being excluded due to relevance, as either the research topic or the experiences described were quite different to the FIFO employment under focus in this study, and they were deemed not relatable or sufficiently relevant to be included. Therefore, all the studies represented in the first section of this literature review are Australian studies and have been reviewed by the researcher to align with the FIFO experience or deemed to be relatable to the concepts presented in the research problem. The studies generally gathered data from the FIFO workers themselves, although a growing body included data from the partner and/or children. The children who participated in these studies were school age or older, with Lester (2015) including adolescents (defined as 12-17 years of age by the authors), and Bradbury (2011) interviewing children between 8 – 16 years of age. It can be seen

that the perspectives of younger children have not been represented in the current literature, which has mainly (although not always) identified the father as the parent employed in FIFO. This aligns with the current study in which all participants had male partners who were employed in FIFO work.

The resulting sources were reviewed by the researcher, and catalogued according to topic first, and then by participants (i.e., workers only, workers and partners, children). Key concepts and findings of the literature were noted, as well as strengths and limitations, and following this, themes were developed of notable and relevant concepts. Hard copies of the literature were kept in order for the researcher to refer back to during the refining of the themes. The literature review in this chapter presents these themes and provides the reader with an overview of the research on the topic, as well as critical discussion of the literature presented.

2.2 The Fly-In, Fly-Out Experience for Workers and Families

A growing body of literature is emerging to better understand the implications of the FIFO employment practice on the people involved. The largest amount of literature is focused on the mental health and wellbeing of the workers themselves, however there is an evolving focus on the effects of FIFO on the partners and children of the workers, and the effects on the families overall. Research to date has demonstrated both positive and negative impacts for workers, partners, and families in relation to the FIFO lifestyle, and these will be discussed below.

2.2.1 Loneliness, Isolation, and Sadness – Negative Emotions Associated with FIFO

Loneliness and isolation have been widely reported as a source of stress for FIFO workers (Barclay et al., 2013; Bowers et al., 2018; Clifford, 2009; Colquhoun et al., 2016; Henry et al., 2013; James et al., 2018) as well as for partners (Gardner et al., 2018; Mayes, 2020; Misan & Rudnik, 2015; Torkington et al., 2011). For workers, being away from their family and loved ones was a recurring theme (Gardner et al., 2018; Henry et al., 2013), with workers describing sadness at leaving when returning to ‘swing’ (Misan & Rudnik, 2015) as well as missing time with their children while away

(Torkington et al., 2011). Workers also reported that missing important events whilst on 'swing' (Bowers et al., 2018; Clifford, 2009; Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013) was a significant stressor, and further expressed that they were unable to participate in regular sporting or community events where rosters precluded this (such as not being at home on consistent days in order to play in team sports) (Henry et al., 2013; Misan & Rudnik, 2015; Torkington et al., 2011).

Workers and partners have also reported similar effects for the partner, and for children. Children have identified feeling sad when their father leaves (Misan & Rudnik, 2015) and missing having their father around whilst he is on 'swing' (Bradbury, 2011). In addition to feelings of sadness and loneliness being experienced by the partner (Misan & Rudnik, 2015; Torkington et al., 2011), a more complex aspect was uncovered by Mayes (2020) wherein partners described a sense of loneliness and social isolation as a result of rosters that precluded them from having or participating in established social constructs such as the conventional weekend. Some families reported choosing to celebrate important events such as birthdays or Christmas earlier or later in order to have the worker present and able to participate (Henry et al., 2013), indicating mitigating strategies developed by these families.

2.2.2 Together, and Apart

The nature of FIFO work means that one cannot, by definition, easily reach your home whilst working. This has been shown to impact on both the worker and partner, resulting in increased responsibilities for partners, and stress for both parties as well as feelings of complete separation of work-life and home-life.

The regular absence of one adult from the household results in an increased burden on the other around the running of the household and/or the care of children and has been reported as an issue of concern for both workers and their partners. Workers identified that they were aware of this phenomenon and reported concern for their partners (Gardner et al., 2018; Torkington et al., 2011). A participant in Gardner's study (2018) described a general acknowledgement amongst

workers that the partner often sacrificed their career in order to take up this increased role in the household. Partners themselves expressed frustration when they felt that the worker was not contributing adequately to the household (Gardner et al., 2018). Of note, amongst participants of Clifford's study (2009), 60.5% of partners who had children were employed outside of the home and, findings indicated that partners took significantly more sick days than workers, proposing this was likely due to the partner being responsible for caring for unwell children while the worker is away. This further highlights the increased burden of home life for the partner during the FIFO worker's absence, particularly in the context of having children.

Several sources have more specifically noted that the age of the children can affect the FIFO experience for the family (Henry et al., 2013; Misan & Rudnik, 2015; Sibbel & Kaczmarek, 2005; Torkington et al., 2011; Vojnovic et al., 2014). This common finding spans years of FIFO research without change. Sibbel and Kaczmarek (2005) identified that the choices and needs of FIFO families are informed by their "position in the family life cycle" (p. 171), while Henry (2013) highlighted that "family composition" (that is, members of the family and their ages) matter, stating that in their study of over 900 FIFO workers, those with children reported higher levels of stress than those without. Misan and Rudnik (2015) concluded that having a young family whilst working FIFO "was not a good mix" (p. 10), with participants with young families reporting missing their children, and preferred shorter roster lengths during this time. Missing time with children as well as important milestones and experiences of childhood (such as starting school) were also identified as negative aspects of the FIFO lifestyle, clearly described by one (worker) participant (Torkington, 2011, p. 137):

> *"Fathers not seeing their children grow up, not seeing their first tooth growing and that sort of stuff, birthdays, the whole box and dice."*

For workers, the inability to help at home or respond to potential family emergencies is also

a significant source of stress (Clifford, 2009; Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Lester et al., 2015; Torkington et al., 2011). One FIFO worker in Gardner's 2018 study (p. 4) describes it succinctly:

> *"We only have two flights here every week, Monday and Thursday. Once that window to escape closes, you are trapped, and constantly hoping that nothing happens back home."*
>
> Again, this finding is consistent across the literature. Studies citing this finding were conducted between 2009 and 2017 and included data from the workers as well as partners, showing that this finding remains consistent across time and affects both parties.

This dichotomy of living apart whilst being together is a complex issue, with both workers and partners describing the feeling of leading two separate lives (Gardner et al., 2018; Mayes, 2020). Workers frequently described difficulty with the transition from work to home and the attendant change in roles and expectations of behaviour (Gardner et al., 2018; Henry et al., 2013; Torkington et al., 2011) and partners echoed this difficulty (Gardner et al., 2018; Misan & Rudnik, 2015). Workers may feel like an "outsider" when returning to the family (Torkington, et al., p. 137; Gardner, et al., p. 4), and conflict can arise when the worker is unable or unwilling to settle into the routine that is already set at home (Henry et al., 2013; Lester et al., 2015; Misan & Rudnik, 2015). One partner (in Gardner 2018, p. 4) succinctly noted; *"… He tries to change things to his way of doing, which creates havoc in the household"*. This phenomenon should not be undervalued, particularly in the context of a household with young children or a breastfeeding relationship.

Interestingly, research conducted by Pini and Mayes (2012) reported that partners felt the emotional needs at home were less valued than those of the workplace. This research analysed online discussion forum posts by partners of FIFO workers, and their analysis found themes that align clearly with other research in this area. The main aspects that were noted to affect the partner's experience of FIFO were: the roster of the worker (longer being more difficult), travel time encroaching on home time, and access to communication with the FIFO worker. Researchers

determined that the vast majority of posters to the forum were women, and data was examined from the perspective of gender where it was found that partners described a "need to suppress and subordinate emotions" (p. 83). That is, that the workplace is "prioritised" over the emotional needs of those at home (p. 83). This can be aligned with other findings in which partners (who were female in these studies) are identified as having greater emotional difficulties than workers which included experiencing stress, anxiety, and depression (Bradbury, 2011; Dittman et al., 2016; Kaczmarek & Sibbel, 2008).

It is worth noting that contrary to most of the studies in the area, the Pini and Mayes study involved an analysis of FIFO discussion forums online, and not interviews or interaction directly with participants. This methodology, termed "virtual phenomenology" (Pini & Mayes, 2012, p. 75) is valuable in its ability to observe raw data that is not able to be biased by the frame of a research study. The data emerges from the participants' lived experiences, and not a research question, which provides a unique insight. The study also contained limitations in that participant data was not able to be identified clearly, although the authors propose that the vast majority of posts to the forum were from females with FIFO partners. They also noted that participants lived all over Australia and included women who identified as new-to-FIFO as well as those experienced in this lifestyle. Research that incorporates these sources of information are valuable and necessary, as the new-to-FIFO perspective is not well represented in the literature to date. This issue will be discussed further in chapter five.

In some instances however, this cycle of presence and absence of the FIFO worker has been viewed positively, with some workers expressing that they appreciated the break from family (Henry et al., 2013), and also that some felt their partner likely appreciated not being impacted by stressors that the worker may bring home from work if living residentially and working: *"And if you had a bad day at work you probably took it out on the wife and kids… she doesn't have to worry about me coming home"* (Torkington et al., 2011, p. 139). Bradbury's (2011) study, which included children (8 to 16 years of age) and partners as well as FIFO workers, identified that there were several perceived

positives to the worker's absence, including increased responsibility and resilience that was developed by the children. This finding was reported by both the parents and the children themselves. Additionally, the complete separation of work and home life, in which workers are not expected to do or be in contact with work during their time at home, is seen as an enormous pay-off of the lifestyle, by workers, partners and children (Bradbury, 2011; Henry et al., 2013; Misan & Rudnik, 2015).

2.2.3 Tiredness and Fatigue

Tiredness and fatigue for workers is widely reported and has been found to impact on the safety of the workers as well as their ability to re-integrate with life at home. Colquhoun (2016) conducted focus groups of both FIFO and drive-in, drive-out (DIDO) workers across four sites and identified that fatigue can be roster related or travel related. They described "irritability and stress from long shifts" (p. 5) and time-consuming commutes between their place of work and home, such as hours of driving to the airport in addition to the flight home. Pini and Mayes (2012) identified that when travel time encroached on home time, this had a negative effect on the partners at home. The fatigue of workers also raises safety concerns (Henry et al., 2013; Langdon et al., 2016), including potential risk for fatigue related accidents (Kecklund & Axelsson, 2016) at the workplace and also at home. Workers and partners also report that workers often feel tired upon their return home (Clifford, 2009; Henry et al., 2013; Mayes, 2020; Misan & Rudnik, 2015). Although the ability to spend quality time with family as a benefit of this lifestyle choice is repeated throughout the literature (Bradbury, 2011; Henry et al., 2013; Lester et al., 2016; McPhedran & De Leo, 2014), workers have noted that it was not always possible to actually spend this time as intended, often due to the need for rest after returning home from the 'swing' on site (Bradbury, 2011; Misan & Rudnik, 2015; Torkington et al., 2011).

Sleep disturbances are another cited reason for tiredness and fatigue amongst FIFO workers (Barclay et al., 2013; Henry et al., 2013; Langdon et al., 2016). Results from Barclay's (2013) survey of 286 FIFO workers indicated that 70% of workers reported sleep disturbances, with 20% of

participants rating the level of disturbance to be “moderate to severe” (p. ii). Interestingly, research has now shown that this phenomenon is not confined to the worker, with partners also experiencing reduced sleep whilst the FIFO workers are on ‘swing’, and poorer sleep overall regardless of whether the worker is home or not (Wilson et al., 2020). Wilson’s study aimed to determine the effect of the FIFO lifestyle on the partner’s sleep specifically, and also to identify factors that could be linked to this. Often young children are identified as much of the cause of this poor sleep, as the increased burden of caring for the child or children alone does not allow for the stay-at-home partner to catch up on missed sleep (Wilson et al., 2020).

Another interesting finding in relation to tiredness and fatigue and families with children is that when the workers felt that they did not have enough time at home, there was an increase in the worker’s (and generally to a smaller extent the partner’s) perception of hyperactivity in their children as measured by Goodman’s (1997 as cited in Robinson et al., 2016) Strengths and Difficulties Questionnaire (SQD) which is used to assess psychological and physiological wellbeing of children (Robinson et al., 2016). Additionally, if the worker returned home tired, this increased the rates of the child experiencing emotional, behavioural and/or peer issues according to their parents’ responses on the SDQ (Robinson et al., 2016). The authors identified that a limitation of this study is that direction of causality cannot be determined for these phenomena given the cross-sectional nature of the study. That is, it is difficult to determine if the absence or tiredness of the worker led to the perceived issues, or if the children’s behaviour led the parents to feel the worker should be home more. Although the results of the study align with other literature on the effects of fatigue and tiredness in the sector, it must be noted that Robinson et al.’s (2016) study included local and FIFO workers in the mining and energy sector and did not differentiate between them in the results. The reasoning for this was that local workers were engaged in long shift work (usually 12 hours shifts) and that this, in addition to commute and sleep time, meant that workers “effectively abandon their parental roles” during their roster (Robinson et al., 2016, p. 559), and thus both local and FIFO workers were included and deemed relevant for that particular study.

2.2.4 Physical Wellbeing

The physical health of workers has been found to be adversely affected by tiredness and long work hours. FIFO rosters incorporate both shift work and long working hours and, working over 38 hours in a week has been independently associated with increased cardiometabolic risk factors including increased waist circumference, increased glucose values and decreased HDL cholesterol levels (Reynolds et al., 2018). Additionally, shift work and insufficient sleep have been linked with increased risks of type 2 diabetes, heart disease, stroke, and cancer, being overweight and experiencing increased accidents (Kecklund & Axelsson, 2016). In further support of this phenomenon in FIFO workers, Clifford's (2009) study on FIFO workers and their partners reported that the majority of worker participants were overweight, with male workers displaying significantly higher rates of overweight and obesity than the Australian comparable average. Again, physical health alterations are not confined to the FIFO workers themselves. Peetz et al. (2012) investigated the impacts of working arrangements on both workers and their partners and identified that partners experienced gastrointestinal (GI) symptoms, teeth grinding, depression, anxiety and headaches which correlated to how tired they perceived the worker to be when they returned home from being on 'swing'.

2.2.5 Work-Family Conflict

Work-family conflict is defined as the incompatibility between the roles of work and family, in which "participation in the family role is made more difficult by virtue of participation in the work role" (Weer & Greenhaus, 2014, para 1). Tiredness upon returning home has been associated with higher levels of work-family conflict for FIFO workers (Funstan, 2012), as it can impact on 'quality time' and one's ability to participate in the family (Bradbury, 2011; Misan & Rudnik, 2015; Torkington et al., 2011) as mentioned above. Children who participated in Bradbury's study (2011) on the implications of FIFO-related parental absence on children readily described the fatigue of the worker on returning home. However, some children expressed particular difficulty adjusting to their father's absence and return, which may play a role in the perceptions of problems such as

behaviours and emotions, in addition to, or alongside, the fatigue of the worker upon returning home.

It can be seen that tiredness and fatigue are common amongst FIFO workers. Findings implicating physical and psychological symptoms of the partner as well as the worker may not have been anticipated and highlight the significance of these issues on the whole family. This is relevant for families who are also trying to maintain breastfeeding, as these factors are likely to impact on the worker's ability to support their partner. Being fatigued may affect their capacity to give emotional support but is also likely to particularly influence the provision of practical support that is so well documented as an important element in maintaining breastfeeding (Keevash et al., 2018; Meedya et al., 2010). Negative factors associated with FIFO, such as fatigue, stress, and overweight, have also been demonstrated to impact breastfeeding. Knowing that the partner also often experiences psychological and physical impacts as a result of the FIFO lifestyle further highlights the need to understand and support breastfeeding families, as this will have additional implications for the continuation of breastfeeding in these families.

2.3 Relationships and FIFO

Relationships have been found to be both adversely and positively affected by the FIFO lifestyle. It may be logically assumed that regular absences from one's partner may cause difficulties or issues within a relationship, and this has been reported by both workers and partners (Gardner et al., 2018; Kaczmarek & Sibbel, 2008; Torkington et al., 2011). As discussed previously, loneliness and isolation are common experiences for both (Torkington et al., 2011). Physical separation can lead to a feeling of disconnectedness (Gardner et al., 2018), and an impaired ability to communicate whilst the worker is on 'swing' could exacerbate this. Distrust, anxiety, and resentment have been described by workers and partners. Some studies report partners' concerns about trust (Henry et al., 2013) and fidelity related to "physical and psychological distance" (Gardner et al., 2018, p. 4), whilst others describe resentment as a result of the increased burden on the partner (Gardner et al., 2018;

Misan & Rudnik, 2015). Regular absences and the reported difficulties with community participation are also important factors that are likely to be associated with difficulties in forming and maintaining friendships and relationships (Torkington et al., 2011). In contrast, relationships have also been found to be successful and healthy, reflecting the mixed findings of almost all FIFO literature (Bradbury, 2011; Clifford, 2009). It is important to review and reflect on these successful relationships also, and this will be explored throughout the relevant sections which follow.

2.3.1 Communication and FIFO

Communication difficulties were widely reported as significantly affecting relationships (Colquhoun et al., 2016; Henry et al., 2013; Lester et al., 2015; Torkington et al., 2011), with workers, partners, and children identifying that the ability to communicate effectively and regularly was an important factor in maintaining relationships and mitigating negative impacts associated with the FIFO lifestyle (Gardner et al., 2018; Lester et al., 2015; Misan & Rudnik, 2015; Torkington et al., 2011).

Generally, communication difficulties arose from the varied availability of technology whilst on 'swing', such as being out of range for internet or mobile, or the ability to be available to communicate whilst on shift (Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Meredith et al., 2014). Access to communication does not guarantee a positive experience however, as the privacy to communicate effectively has also been identified as an issue (Barclay et al., 2013; Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Meredith et al., 2014). Where workers do have access to mobile reception and internet on site, it is not necessarily available in their own accommodation (Colquhoun et al., 2016; Misan & Rudnik, 2015). Workers reported a preference for a room to themselves and the ability to return to the same room each 'swing' as a priority for them, as well as internet and mobile reception in their rooms (Barclay et al., 2013).

Beyond the availability of communication however, more complex communication difficulties were reported, such as finding phone communication less effective and more difficult

than face to face conversation (Gardner et al., 2018), and a general difficulty with communicating feelings and emotions (Kaczmarek & Sibbel, 2008). In Gardner et al.'s study (2018) both workers and partners identified "psychological distance", including loneliness and isolation as well as communication difficulties as an associated strain on relationships and potentially leading to distrust between partners (p. 6).

Kaczmarek and Sibbel (2008) found increased difficulty in communicating emotions in the partners of both FIFO workers and military personnel, as compared to a community sample. However, the authors identified that this appears to be more related to the "professional orientation" of the worker (either as a miner or military personnel), than to the length of time that the worker is away from the household (p. 308). Nonetheless, it is a finding of significance in the face of continuing reports from FIFO families of the importance of communication in developing effective coping mechanisms to manage the lifestyle (Colquhoun et al., 2016; Henry et al., 2013; Lester et al., 2016; Meredith et al., 2014; Misan & Rudnik, 2015; Torkington et al., 2011).

The identification of specific issues should not imply that relationships for FIFO workers and their partners and families are necessarily negatively affected overall. The concerns listed as affecting communication are identified by reports from workers and partners, indicating an awareness of the factors involved, regardless of their ability to mitigate the circumstances. In many instances, workers and partners have also identified mediating or coping strategies and these are equally important in the context of this study, which is to identify the enablers as well as barriers for women who are breastfeeding whilst their partner is employed in a FIFO capacity.

It is generally acknowledged that regular communication is an essential element in maintaining relationships whilst living a FIFO lifestyle (Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Lester et al., 2015; Sibbel, 2010; Taylor & Simmonds, 2009; Torkington et al., 2011). In some studies, participants reported even more specific strategies to enable or enhance communication, such as using social media and other methods of communication beyond a phone

call (Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Lester et al., 2015; Misan & Rudnik, 2015), or thoughtful preparation for communicating with family Lester et al. (2015), such as when communicating with adolescents over the phone. Lester's (2015) study interviewed FIFO families with adolescent children and identified that implementing specific times to set aside with family was a useful strategy to ensure communication and family connectedness. Participants reported examples such as weekly 'fish and chip' nights for quality time to talk.

The ability to communicate readily and regularly are deemed highly important for workers and their families living a FIFO lifestyle. FIFO families utilise a variety of technologies and strategies to maintain communication, although this can be hampered by infrastructure and resources available on site at the worker's place of employment.

2.3.2 Challenges with Partner Relationships

It has been established that there are known stressors and negative impacts on maintaining a relationship with a partner whilst working FIFO rosters. This was succinctly demonstrated in Henry et al.'s (2013) findings, which identified that FIFO workers who have a partner are more likely to experience "higher levels of overall stress compared to singles" (p. 7) as measured empirically by the Kessler-10 tool, when assessing psychological distress. Henry et al.'s study included a large sample size in WA (n=924) and sought to understand the factors and predictors of stress and resilience in the FIFO lifestyle.

Several studies have linked FIFO rosters to relationship breakdowns such as separation and divorce (Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013; Torkington et al., 2011). Participants in Gardner et al.'s study (2018) described that even when trying to support each other, a lack of understanding for the experience of the other can be an obstacle for both workers and partners. Anecdotal sources such as online blogs corroborate this finding (Thewrybride, 2015). Clifford (2009) identified that partners who were most dissatisfied with the FIFO lifestyle were characterised by "relatively low levels of relationship depth, low levels of social support and high

levels of Roster Dissatisfaction" (p. 120). This aligns with other findings that indicate positive outcomes were associated with roster satisfaction (Misan & Rudnik, 2015) and control over working conditions (Robinson et al., 2016), as well as research that has highlighted the importance of partner support in a healthy relationship to survive the FIFO way of life (Gardner et al., 2018).

The FIFO lifestyle entails factors that can negatively impact on partner relationships for both the worker and the partner. There are established and well documented factors, including cyclical presence and absence of the worker, isolation and missing each other, fatigue, and communication issues. This knowledge is important to consider in the context of breastfeeding FIFO families as we know that one of the main sources of support for breastfeeding women comes from their partner (Meedya et al., 2010).

2.3.3 Difficulties with Parenting and Children

Anecdotal reports and the nature of FIFO has led to a school of thought that this lifestyle must negatively impact on families with children. Again, as with partner relationships and all aspects of FIFO life, parents and children will have differences in their day-to-day functioning and lived experiences compared to those who are not in similar situations. Several studies have investigated the effects of FIFO on families and the wellbeing of children, and common challenges and experiences have emerged.

As previously stated, tiredness upon arriving home can affect the ability of the worker to spend the desired quality time with the family (Clifford, 2009; Mayes, 2020; Misan & Rudnik, 2015; Torkington et al., 2011), potentially resulting in conflict (Funstan, 2012). FIFO parents have also reported difficulty maintaining consistency of routines and discipline (Bradbury, 2011; Dittman et al., 2016; Lester et al., 2015; Misan & Rudnik, 2015). Dittman et al. (2016) completed surveys of 46 FIFO workers, 232 partners and a community sample for comparison in order to explore the impact of FIFO on families and children, as well as to identify factors influencing outcomes. They found that partners of FIFO workers were more likely to use harsh discipline practices than the community sample. Dittman et al. (2016) did not identify a rationale for this but noted that it was a consistent

finding with US military families who faced similar pressures of paternal absence. They also discussed that these parenting behaviours (harsh discipline such as smacking, shouting or slapping) were associated with negative psychological and behavioural outcomes for children in the long term, and thus the association of FIFO and these parenting practices was concerning. Bradbury (2011) utilised the Parental Problem Scale with 49 families and reported clinically significant levels of conflict between parents in more than 50% of parents sampled, particularly around inconsistency of parenting practices and discipline. Parents cited concerns about the effects of FIFO on their children, worrying there may be negative impacts resulting from the long-term absence of a parent (Gardner et al., 2018; Robinson et al., 2016).

Children have also expressed the challenges that they face with having a parent working FIFO across available literature. Children identified issues such as "loss of paternal support" (Bradbury, 2011, p. 105) and missing the worker while they are away (Bradbury, 2011; Misan & Rudnik, 2015). Beyond this, children have also expressed difficulties or negative aspects of the FIFO lifestyle related to the different roles that the partner and worker have in the family, such as playing games and hobbies that they would typically play with the worker (Bradbury, 2011) and do not do with the at-home parent (or would prefer to do with the worker instead). Beyond this, children of FIFO workers have also identified differences in family functioning when the FIFO worker is home and away. These differences include increased responsibilities around the house for all the family members at home, increased burden and fatigue for the at-home parent and adjusting to a change in role between parents for the children (Bradbury, 2011).

It can be seen that FIFO can have significant effects on parenting and children. This again highlights the importance of gaining insight into the experiences of breastfeeding FIFO families, in order to understand their challenges and barriers, as well as enablers, to best support these families and promote breastfeeding continuation in this group.

2.3.4 Healthy Relationships and Benefits of FIFO

Despite the documented and seemingly prevalent relationship risks, a significant number of studies have demonstrated that in many instances FIFO workers, their partners, and families have good quality relationships (Bradbury, 2011; Clifford, 2009; Sibbel, 2010; Taylor & Simmonds, 2009) and enjoy healthy family functioning (Bradbury, 2011; Dittman et al., 2016; Kaczmarek & Sibbel, 2008; Lester et al., 2015). Remuneration is evidenced as one of the motivations for undertaking FIFO employment, and the associated lifestyle that this allows for the family (Bradbury, 2011; Clifford, 2009; Gardner et al., 2018; Henry et al., 2013; Mayes, 2020; Misan & Rudnik, 2015; Sibbel & Kaczmarek, 2005; Torkington et al., 2011).

Clifford's (2009) study examined the short- and long-term effects of FIFO on workers and their partners (n= 222), and incorporated physiological and self-reported perceived stress levels, as well as a range of tools and questionnaires on topics including satisfaction, distress and anxiety, social support, relationship, lifestyle, and health factors. Clifford's work concurred with other findings of negative impacts of FIFO on relationships, such as missing important events (Bowers et al., 2018; Colquhoun et al., 2016; Gardner et al., 2018; Henry et al., 2013), difficulty participating in the community (Henry et al., 2013; Mayes, 2020; Torkington et al., 2011), missing loved ones (Gardner et al., 2018; Henry et al., 2013; Misan & Rudnik, 2015; Torkington et al., 2011) and being tired when workers return home (Mayes, 2020; Misan & Rudnik, 2015; Torkington et al., 2011), but also found that workers and partners report "high levels of relationship support and depth, and low levels of conflict" (p. 123). Participants in Torkington et al.'s study (2011) identified that an "independent or resilient partner" was helpful for the FIFO lifestyle (p. 139), whereas a partner who was less able to be independent may struggle more with the lifestyle. Taylor and Simmonds (2009) had workers and partners (n= 63) complete questionnaires containing an assessment tool related to family functioning and found that families were "generally happy" (p. 29) and functioning healthily. Findings in this study also identified that FIFO families were effective communicators and had a high level of flexibility, which authors suggest allows the family to adapt to the circumstances required of

the FIFO lifestyle. Sibbel (2010) also found that workers and partners (n=122) were satisfied with their relationships and fell into the healthy range of relationship functioning. This study noted that workers and partners "did not significantly differ in their reports of relationship satisfaction" (p. 104), and this is worth noting in view of other studies who have found that partners experienced difficulties expressing emotions (Kaczmarek & Sibbel, 2008). A literature review on the impacts of FIFO on children and families conducted by Meredith et al. (2014) concluded that FIFO couples generally reported positive relationships and healthy family functioning.

Across the literature, a major motivation for undertaking FIFO employment was to access the remuneration on offer (Bradbury, 2011; Clifford, 2009; Gardner et al., 2018; Mayes, 2020; Misan & Rudnik, 2015; Sibbel & Kaczmarek, 2005). Although there is acknowledgement that some workers felt "trapped" and unable to leave FIFO because of this (Gardner et al., 2018), often for FIFO families, the remuneration is seen as a means to facilitate the lifestyle that the family is seeking, by enabling the worker to provide for the family (Bradbury, 2011; Henry et al., 2013) or allowing the partner at home to work less or not at all (Mayes, 2020; Misan & Rudnik, 2015).

It was noted by Arnold (1995) that there was a lack of literature surveying those who were new to FIFO, or who had left FIFO, and this continues to date. Cooke et al. (2019) proposes that FIFO may involve a self-selection phenomenon, where those who do not adapt to the FIFO lifestyle leave it. This results both in the resilient characteristics of FIFO families being highlighted in the literature, and at the same time results in those who leave the FIFO way of life not being around to portray their experiences in research into FIFO workers and families. Given the established ongoing need for FIFO in WA, it is important to be able to provide effective support to these families to continue and succeed within the FIFO lifestyle. With the literature examining workers, partners, and families with older children to date, it is imperative that we better understand the experiences and needs of FIFO families who are breastfeeding in order to provide appropriate and effective supports and services.

It can be seen that the growing body of literature surrounding the impact of FIFO on workers, partners and families is increasing our understanding of this phenomenon. However, the literature to date is still emerging, and can often provide conflicting information. There are many challenges and risks associated with FIFO lifestyles, yet it can be seen that for those families who are able to successfully navigate these, the outcomes are often healthy, happy relationships with the rewards such as remuneration and associated lifestyle benefits including quality family time, considered worth the challenge.

2.4 Factors Affecting Successful Breastfeeding Continuation

The benefits of breastfeeding for both baby and mother are widely acknowledged (COAG, 2019; Smith et al., 2018; WHO, 2020). Research into effective methods of promoting and supporting breastfeeding is ongoing, as breastfeeding rates in Australia and many other countries remain well below established targets (ABS, 2019b). A systematic review conducted by Meedya et al. (2010) identified both modifiable and non-modifiable factors affecting breastfeeding duration from birth to six months of age. Non-modifiable factors included age, marital status, education level, income level, perceived birth experiences, perceived milk supply and early breastfeeding practices (Meedya et al., 2010). Factors identified as modifiable by educational intervention include breastfeeding intention, self-efficacy, and social support (Meedya et al., 2010). The literature presented here and incorporated into the discussion in Chapter 5 will focus on modifiable factors to address the research objective of outlining potential means of support for mothers and families living a FIFO lifestyle to maintain breastfeeding in keeping with Australian Government (COAG, 2019) and the WHO (2014) targets.

Choosing and maintaining breastfeeding is not always an easy process, with many factors influencing the ability of the mother and baby to continue. The following section will further explore the literature surrounding modifiable factors supporting breastfeeding to identify what is known in this area.

2.4.1 Breastfeeding Intention and Access to Support

Breastfeeding intention is a strong predictor of a woman's initiation and duration of breastfeeding (Meedya et al., 2010). The decision to breastfeed is usually made by the woman before or early in her pregnancy (Datta et al., 2012), and women with extroverted and conscientious personality traits as well as emotional stability have been reported as more likely to initiate and continue breastfeeding (Brown, 2013). Partners have been found to have a strong influence on the choice of infant feeding method (Meedya et al., 2010; Rempel & Rempel, 2011; Scott et al., 2001; Tohotoa et al., 2009). This influence may be due either to their actual preference, or the woman's perceived views of the same (Arora et al., 2000; Rempel & Rempel, 2011). Sources have suggested that some women choose to formula feed their babies in order to allow the father more involvement and time to bond with the baby (COAG, 2019; Earle, 2000). This is supported by findings from the Australian National Infant Feeding Survey (Australian Institute of Health & Welfare [AIHW], 2010) which identified that 28.5% of women chose not to breastfeed to allow the partner to "share feeding" (p. 39).

Breastfeeding intention is informed not only by personal choice, but also by the influence of the woman's social support and attitudes of those in her social network (Meedya et al., 2010). This is relevant for FIFO families for several reasons; one is that a significant source of social support comes from the woman's partner, whose role often includes practical assistance with the household and caring for other children, as well as offering emotional support (Datta et al., 2012; Rempel & Rempel, 2011). Non-breastfeeding partners also play a role in learning about breastfeeding in order to assist with difficulties (Rempel & Rempel, 2011). A further reason is that other forms of social support are also important, including family, friends, peer and professional support from healthcare workers or breastfeeding services. It is known that the FIFO lifestyle can affect social support as well as partner support. Anecdotally it has been reported that there can be a stigma to choosing a FIFO lifestyle, sometimes leading to reluctance to seek assistance or support (Stunzner, 2018). Additionally, if the family has relocated for this employment, they may not have family and/or friends close by. In a

study conducted by Gallegos (2005), FIFO families stated that the most common form of social support available was the family of the partner living at home, followed by formal childcare, family of the FIFO worker, mothers'/play groups, neighbours, doctors, and cleaners. A breastfeeding mother whose partner is FIFO may have difficulty accessing these supports, particularly when the worker is away from home and unable to assist in travelling to groups and appointments. Additionally, the ability of the partner to support her emotionally and practically whilst breastfeeding will also be limited whilst they are on 'swing'.

In reviewing the research relevant to breastfeeding and FIFO families, the author searched the literature for information on single parents and breastfeeding. This was again a difficult concept to find studies on, particularly in an Australian setting, although the AIHW (2020) identified that only 46% of infants in single parent household were exclusively breastfed to four months, as compared with 64% of infants in two-parent households. Marital status has been associated with increased breastfeeding rates (Meedya et al., 2010). A recent US study that looked at co-resident grandparent, mother and infant households identified that "being in a relationship was very clearly correlated with more breastfeeding" (Carpay et al., 2021, p. 373), and further found that cohabitating mothers breastfeed more than single mothers and married mothers breastfed more than cohabitating mothers. As this is a US study, there are likely to be cultural differences, particularly in multiple generations residing together, to be considered in the applicability of this to the FIFO population. Additionally, the reasons for living with family in this way may be linked to factors such as socioeconomic disadvantage or age which may also impact on breastfeeding. An Australian study reviewed the determinants for early introduction of complementary foods in a cohort of NSW infants (n=934) and found that single mothers were more than twice as likely to introduce solid foods before the infant was 17 weeks of age (Arora et al., 2020), which is much earlier than the recommended exclusive breastfeeding to six months. This study did not investigate the rationale for this phenomenon but did demonstrate that early introduction of solids was inversely related to breastfeeding duration. It can be seen from the information presented that breastfeeding for single

parents is empirically different to those with partner support, and is worthy of note in the consideration of supporting breastfeeding in FIFO families where cohabitating and married couples experience the absence of the worker during FIFO 'swing'.

A Cochrane review on supporting breastfeeding for healthy, term babies identified that not only does breastfeeding support extend breastfeeding, but that it should be "provided as a standard by trained personnel… and tailored to the setting and the needs of the population group" (McFadden et al., 2017, p. 30). Currently in WA, government support for new parents is delivered by a child health nurse at 0-14 days, 8 weeks, 4 months, and 12 months postnatally (WA Department of Health, n.d.b). The Western Australian Child and Adolescent Health Service (CAHS) implements the Breastfeeding Protection, Promotion and Support Guidelines as outlined in the Community Health Clinical Nursing Manual (CAHS, 2020a), and this requires that all staff in contact with pregnant or breastfeeding women be required to have "the knowledge and skills necessary to implement the breastfeeding policy" (p. 3). However, the education resources provided for this purpose are in-service learning modules, and staff are only required to complete these within twelve months of commencing employment and refresh every two years (CAHS, 2020a). CAHS also includes a dedicated breastfeeding support service (CAHS, 2020b) however wait lists for this can often be long, again limiting the usefulness of such a service. The service policy indicates outcome measures including measuring the proportion of clients who are contacted, reviewed, and engaged with the service as well as proportion of families that self-report a "successful resolution of breastfeeding concern" (CAHS, 2020b, p. 5). However, these are not reported on in the CAHS Annual Report (CAHS, 2020c), with the exception of a statement acknowledging that the "Breastfeeding Support Service was reviewed in 2019, with a number of improvements implemented aimed at providing a more responsive, timely service" (p. 40). The CAHS (2019) 2018-19 Annual Report does not mention breastfeeding. It can be seen that child health nurses may, but are not required to, have qualifications in breastfeeding (WA Department of Health, n.d.a), and therefore advice and referrals surrounding breastfeeding often relies on the discretion and experience of the individual health

practitioner. By inference from the reporting provided, it can be assumed that waiting times for publicly funded breastfeeding services are suboptimal. Families may seek private specialised services however they need to be aware of this option, identify a need to do so (i.e., they feel that the advice they receive or the services provided are not beneficial for them), and be able to afford to do so.

The importance of access to support for breastfeeding mothers is well established (Gianni et al., 2019; Meedya et al., 2010; Smith et al., 2018), and access to support networks has been shown to influence mothers' breastfeeding decisions and experiences, such as partner and family support for breastfeeding positively influencing the woman to choose and/or maintain breastfeeding (Hauck & Irurita, 2003). It is possible that having a partner who works a FIFO roster may influence a woman's confidence in her ability to breastfeed successfully if her access to support is limited as a result. This study provides insight into the experiences from women who are in the position of breastfeeding whilst their partner works a FIFO roster and begins to fill the knowledge gap in this area.

2.4.2 Breastfeeding Self-Efficacy

Self-efficacy is a concept derived from Bandura's Social Learning Theory (Bandura, 1977), and can be defined as a "belief in one's own ability to successfully perform a behaviour" (Nutbeam, 2013, p. 29). Bandura purported that efficacy expectations were influenced by four factors: "performance accomplishments", "vicarious experience", "verbal persuasion", and "emotional arousal" (Bandura, 1977, p. 195). More recently, Dennis (1999) applied the theory of self-efficacy to breastfeeding. Dennis' work led to the development of the Breastfeeding Self-Efficacy Scale [BFSES] (Dennis & Faux, 1999), which was later refined to the Breastfeeding Self-Efficacy Scale Short Form [BFSES-SF] (Dennis, 2003). These tools have been validated and utilised extensively in research to assess and improve breastfeeding self-efficacy [BSE] (Brockway et al., 2017; Galipeau et al., 2018; Gregory et al., 2008; Tuthill et al., 2016). Since then, further tools have been developed and evaluated for their use in measuring BSE (Cleveland & McCrone, 2005; Wells et al., 2006 as cited in

Tuthill et al., 2016), demonstrating the importance of evaluating BSE, and its relationship with successful breastfeeding.

Two recent systematic reviews and meta-analyses were conducted into the effectiveness of self-efficacy interventions (Brockway et al., 2017; Galipeau et al., 2018). Brockway et al.'s (2017) review aimed to determine whether interventions to improve BSE were effective, and also to investigate if they resulted in improved breastfeeding rates. A total of 11 studies were included in the final synthesis and meta-analysis, and results indicated that interventions targeting BSE resulted in a significant improvement in BSE as well as increased odds of exclusive breastfeeding. The studies in this review did not measure outcomes beyond two months postpartum. We therefore do not have information on BSE after this period, despite guidelines that identify exclusive breastfeeding until 6 months as being the optimal nutrition for infants (WHO, 2014). It is important to acknowledge this gap in the literature as we aim to improve breastfeeding rates in Australia.

Galipeau et al. (2018) aimed to determine the effectiveness of BSE interventions on resulting BSE and perceived milk supply. A total of 17 studies were included, including 12 randomised controlled trials [RCT]. Results of this review indicated that interventions were successful in improving BSE, which, in turn, had an effect on improving rates of exclusive breastfeeding at four and six weeks. Of the 17 studies included, only seven measured breastfeeding to six months, with five of these measuring exclusive breastfeeding to six months. Although both reviews agreed on the major outcomes of the interventions, the specifics such as timing, mode, and duration of intervention delivery, resulted in conflicting outcomes, with Brockway et al. (2017) identifying that the most influential interventions had a theoretical basis, were delivered in a combination of settings, or were delivered postnatally. Between these reviews, interventions based on education were the most successful approach (Brockway et al., 2017). Alternatively, Galipeau et al. (2018) found that interventions that were based on self-efficacy and not education were the most successful, as were those delivered both ante- and postnatally. Their findings agreed with Brockway et al. (2017) that interventions delivered in a combined format (education, support, or BSE-based)

were more successful. The authors noted that caution should be used when interpreting the results of the specific elements listed in their review, as they were often based on small sample sizes and limited studies (Galipeau et al., 2018). This is also true of studies in Brockway's (2017) review. Pertinent to this research, however, is the finding that tailoring interventions resulted in "significant improvements in both BSE and any breastfeeding rates at 1 month postpartum" (Brockway et al., 2017, p. 494). Data was not provided on longer-term outcomes.

In summary, this study aimed to fill some of the current gap in knowledge around the breastfeeding families within the FIFO population by exploring the experiences of mothers with breastfeeding children of any age in FIFO families to provide data beyond the early stages of breastfeeding, as well as identifying enablers that support breastfeeding in this group. Breastfeeding self-efficacy can be defined as a mother's self-determination of her "capability to breastfeed her new infant" (Dennis & Faux, 1999, p. 400). The purpose of the study reported in this thesis was not to measure BSE in this instance, but to identify enablers to breastfeeding in FIFO families, and the importance of BSE in successful breastfeeding means that it is likely to arise as, or inform, enablers identified by the participants. The continuing development and use of these BSE tools and the large body of literature indicate the interest and commitment of the health community to increasing self-efficacy as a measure to support breastfeeding. Recent systematic reviews have concluded that breastfeeding self-efficacy can be improved by intervention, and this can have positive effects on breastfeeding rates.

2.5 Conclusion

Families who live in a FIFO lifestyle face a number of unique challenges to their personal, family and wider social lives. More recent literature has also increasingly demonstrated the effects of FIFO employment on the health and wellbeing of the worker as well as their partner. The negative aspects associated with the FIFO lifestyle such as reduced partner and family support, increased burden of home duties on the stay-at-home partner, and fatigue all have the potential to impact on

a mother who is attempting to maintain breastfeeding. This is highlighted by the established importance of partner and social support, practical support and confidence, and self-efficacy that are so often linked with these. Despite this, there have been positive aspects associated with the FIFO lifestyle, including focused time with family away from work responsibilities, remuneration allowing flexibility in lifestyle, and intentional strategies that result in close, bonded families. These have the potential to mitigate some or all of these challenges, or indeed incidentally facilitate an environment that is more supportive of breastfeeding than the general population. The purpose of this research study was to explore the experiences of women who are breastfeeding whilst their partner works a FIFO roster, to determine the needs and recommendations for supporting breastfeeding in this group. The following chapter will present the methodology used to conduct this study and describe its implementation across the different aspects of this research.

Chapter 3 - Methodology

The purpose of this section of the thesis is to define and describe the research paradigm and methodological approach that was used in the design and implementation of this research project. The chapter will discuss the importance of qualitative and quantitative research in the nursing and midwifery space and identify why a descriptive qualitative approach was selected. This study aimed to identify the enablers and barriers to breastfeeding for women whose partners are working a FIFO roster, according to their own perspectives. The research design is described and the rationale for its choice is explained. Sampling and recruitment strategies are outlined, as well as data collection methods and their rationale. Following this, a description and justification for the data analysis method selected is presented. The strategies utilised to ensure the trustworthiness and authenticity of the findings are outlined, and finally, the ethical considerations that informed the design and execution of the research are presented.

3.1 The Importance of Qualitative and Quantitative Research

The world of academic inquiry can be divided into two distinct types of research: quantitative and qualitative. All research paradigms and methods fall into these two categories. It is becoming increasingly common to utilise a mix of both (Polit & Beck, 2018), particularly in health research. The purpose of this section is to define and discuss quantitative and qualitative research, highlighting the differences and rationale for both with a focus on nursing and midwifery research in particular.

Scientific research has traditionally been conducted within a positivist paradigm that produces clearly measurable results. Quantitative research is also known as “empirico-analytical” (Richardson-Tench et al., 2018, p. 8), so called because of its generation of information that is derived from empirical variables and outcomes. A positivist paradigm purports that there is one objective reality of the world, and scientific understanding is developed by measuring against this

reality (Richardson-Tench et al., 2018). This type of research is appropriate for answering research problems that are measurable (Polit & Beck, 2018), such as improvements in patient outcomes pre- and post-treatment.

While quantitative research has provided monumental advances for societies and is an essential methodology for exploring the world in an objective and methodical manner, when the research problem requires moving beyond measurement and into meaning, a qualitative approach is more relevant and appropriate (Polit & Beck, 2018). By its very nature, quantitative inquiry alone cannot provide insight into the experience behind the data, and within healthcare our understanding cannot be complete without enquiry into the human element and an understanding of the lived experience. Where quantitative research may provide answers to the pathophysiology of a condition, for example, it is limited to predict how someone may react to the condition itself, participate in management planning and cope emotionally with their diagnosis. Health is "not merely the absence of disease" (WHO, 2020, p. 1) and the vast body of behaviour change literature attests to the fact that the personal interpretation and response to an event or experience is as important as the objective reality of it (see Rosenstock et al., 1988). Constructivism, as an alternative to the positivist paradigm, holds that multiple realities may exist (Streubert & Carpenter, 2011) because reality is relative to each individual. Qualitative research is concerned with the lived experience (Holloway & Galvin, 2017), and qualitative researchers observe and value the variety of realities that different people may experience during the same event, according to their own personal context. Nursing is often described as both "an art and a science" (Tayray, 2009; Vega & Hayes, 2019) and this captures the importance of both research paradigms in the development and practice of the profession. Nursing and midwifery interventions often include actions to treat a condition, but the heart of nursing is assessing the person's response to their condition and utilising this knowledge to support and promote their health and wellbeing (International Council of Nurses, 2020). By valuing the lived experience, nurses and midwives are able to best support the people in their care to achieve positive health outcomes.

It is clear that qualitative and quantitative research exist to meet different research needs and aims. Accordingly, the design features of quantitative and qualitative studies will differ, in order to best address the research problem. In quantitative research, analysis of empirical data uses a deductive approach to identify relationships between data elements (Polit & Beck, 2018; Richardson-Tench et al., 2018), meaning that the researcher has developed a theory or hypothesis and then determines the truth of this theory from the data. In order to maintain the control of variables, quantitative research is also designed in its entirety before the research is undertaken, and this design is rigid and rarely changed (Polit & Beck, 2018). The empirical nature of quantitative research questions generally requires larger sample sizes than qualitative studies, as the purpose is to "produce studies capable of detecting clinically relevant differences" (Faber & Fonseca, 2014, p. 27). Sampling may be random (probable sampling) or not (non-probable sampling) depending on the aim of the study and the availability of subjects, but in either case the study must have statistical power in order to ensure internal validity (Richardson-Tench et al., 2018). That is, the sample must be large enough to yield a "true result" (Richardson-Tench et al., 2018, p. 131) by avoiding overrepresentation of a small number of variances. Quantitative studies may collect data cross-sectionally (at one point in time) or longitudinally (multiple points of data collection over time) (Polit & Beck, 2018). Longitudinal data collection is generally appropriate for when researchers are attempting to follow or determine a change or sequence of events in the topic or group under study (Polit & Beck, 2018), whereas cross-sectional design does not allow for this ability to follow a cohort.

In contrast to the rigid controls of a quantitative study, a qualitative approach employs an "emergent design" (Polit & Beck, 2018, p. 183), meaning that the design may evolve as the research continues. This allows the researcher flexibility to adapt the research design in response to information that emerges from the data, and fully explore the topic under investigation. Holloway and Wheeler (2010) identify that this flexibility and openness "mirrors" that of healthcare workers (p. 10). The ability to make changes as the study continues allows the researcher to explore elements of the phenomenon under study as they become apparent, providing results with a holistic and often

pragmatic outcome. A variety of sampling and data collection methods reflect the different approaches to qualitative research, and again the selection must be appropriate to the aim of the study. One major difference in qualitative sampling is that random sampling for participants is not appropriate (Holloway & Wheeler, 2010) because the aim of the research is to learn more about a particular experience or determine a meaning rather than objectively identify a cause or analyse an intervention. The researcher uses purposive sampling to select participants according to the topic under study (Holloway & Wheeler, 2010). There are several ways of sampling purposefully, such as homogenous sampling when looking for participants with similar characteristics, or heterogeneous sampling which deliberately looks to include participants with differing characteristics (Holloway & Wheeler, 2010) in order to represent a variety of views and experiences within the study. Data collection methods are also determined by the aim of the study, and may include interviews, focus groups, case studies, fieldwork, observation, or visual data such as art or photography (Richardson-Tench et al., 2018), providing researchers with a variety of tools with which to capture the rich data required. Qualitative data may be collected cross-sectionally or longitudinally also, according to the purpose of the research, and sometimes necessity (such as when a particular phenomenon may not yield easily accessible participants, or participants not likely to engage in a longitudinal study).

Mixed methods research is often used in healthcare, and its strength lies in its ability to be designed specifically according to the data required by the research question (Polit & Beck, 2018). As discussed above, qualitative research can provide rich insight into an experience or a phenomena, often answering why questions and providing a useful tool particularly in health where human behaviour affects almost aspects of care and management. By contrast, many researchers feel that empirical evidence can provide robust evidence to support hypotheses testing cause and effect relationships. A mixed methods approach allows both of these to be addressed in the one study.

3.2 Research Design

3.2.1 Selection of Methodological Approach

In determining the most appropriate approach to researching the topic of the study presented in this thesis, the researcher considered the aim and objectives of the research study, the body of knowledge on the topic, and the scope of the project to align with the requirements of a Master of Philosophy, higher degree by research. The purpose and aims of this study were clearly aligned with a qualitative approach in seeking to explore and understand the experiences of the women living the reality of breastfeeding whilst their partner works in FIFO employment, which heretofore had not been researched. A qualitative descriptive, exploratory research methodology was determined to be appropriate given the lack of published data on the topic, and the aim and objectives of the research study which were to identify, from the women's perspectives, the enablers and barriers to their continuation of breastfeeding whilst their partner was employed on a FIFO roster.

As discussed earlier in the chapter, qualitative inquiry generally aims to uncover meaning, rather than causality. In doing so, the most recognised qualitative approaches such as narrative research, phenomenology, grounded theory, ethnography, and case studies (Cresswell, 2013; Richards & Morse, 2013) entail in-depth exploration of the topic or group under study, and in the words of Richards and Morse (2013) "few stop at description" (p. 50). In some instances, however, the present study included, description is the aim of the research and as such, an overly interpretive approach would be inappropriate. Sandelowski (2000) asserts that qualitative descriptive methodology is a valid and useful methodology, appropriate for "when straight descriptions of the phenomena are desired" (p. 334). The difference between a qualitative descriptive approach and phenomenology lies within the depth of inference drawn from the data. Whereas phenomenology may take a descriptive approach (Holloway & Galvin, 2017), it is rooted in a philosophical tradition and aims to describe meanings of the lived experience (Streubert & Carpenter, 2011). Neither the research aim and objectives nor the scope of this project were appropriate for a phenomenological

study. Sandelowski (2000) notes that with a qualitative descriptive approach, the analysis of the data stays “close to the surface” (p. 334) and thus is more likely to reach consensus by researchers. It also makes it particularly suitable for novice researchers (Colorafi & Evans, 2016; Sandelowski, 2000), which was appropriate as this was the researcher’s first experience with undertaking a purely qualitative study.

Exploratory research is often identified or utilised as a precursor to more in-depth research. Shanks et al. (1993) state that exploratory research “is aimed at formulating more precise questions that future research can answer” (as cited in Williamson & Johanson, 2017, p. 19). The opposing alternative to an exploratory approach is an explanatory one, in which the findings are intended to explain the cause of the phenomenon (Polit & Beck, 2018). Polit and Beck (2018) identify description as a lower level of explanation than exploration, however Sandelowski (2000) notes that descriptive qualitative designs can be a combination of appropriate methods and techniques in accordance with the purpose of the study. In the context of this research an exploratory approach has been utilised within the context of a descriptive design, appropriate for a first foray into an unstudied area.

A cross sectional approach to data collection is when data is collected for the research at a single point in time, sometimes referred to as a “snapshot” (Richardson-Tench et al., 2018, p. 145), and is an economical and useful approach when straight description is required (Polit & Beck, 2018; Richardson-Tench et al., 2018). A cross sectional design was chosen as appropriate for the design and aim of this study, which did not intend to study a change or pattern, but rather describe a lived experience. A description of the methods employed to align with this research design will now follow.

3.2.2 Population, Sampling and Recruitment

Selection Criteria. In keeping with the aim of the study, women who were currently breastfeeding and whose partner was currently employed in a FIFO role were eligible to participate in the study. The study included women in the metropolitan region of Perth due to both the scope of

the project, namely a Master of Philosophy thesis, and to specifically define the population involved. Participants were also required to be English speaking and cognitively intact, meaning that they were able to clearly understand the study, the participation requirements, and communicate their experience for the study. At the start of the study, exclusion criteria included women whose babies were over six months of age, as the breastfeeding relationship and demands usually change around this time as solid foods and water are generally introduced as per the WHO (2014) guidelines. However, after being contacted by women whose babies were over six months old, the researcher reviewed this criterion and discussed the original rationale for this with the supervision team. It was identified that focusing on families with children under six months only was too specific a focus and was likely to limit the understanding of the breastfeeding experience in this population. Additionally, by excluding those who were breastfeeding beyond six months, there may have been an unbalanced emphasis on breastfeeding initiation and the initial maintenance, rather than a more inclusive picture of the continuation of breastfeeding in this group. It was thus identified that the study could only benefit from the inclusion of women's experiences where they had been successful at breastfeeding while their partner worked a FIFO roster, regardless of how long they had been doing this for. In fact, the older the child the more experienced in this particular phenomenon the participants would be. The supervisors agreed with this rationale and an application was made to the Human Research Ethics Committee (HREC) to revise the inclusion criteria, which was approved. Thus, women with babies older than six months were able to be included in the study, although they were required to be currently breastfeeding, in order to limit recall bias, in which reliance on memories rather than current experiences may influence the participants' reporting of events (Richardson-Tench et al., 2018).

Sample. Purposive sampling was used to recruit participants according to the inclusion criteria. Purposive sampling is used when particular criteria need be applied in order to reach the appropriate group under study (Holloway & Galvin, 2017), and utilising this sampling method allowed the researcher to target specific groups during recruitment and sampling to ensure that a variety of

experiences were represented in the study. It was proposed initially that an advertisement be disseminated via the group “FIFO Families”, however once recruitment for the study actually begun the process of advertising research at “FIFO Families” had changed and an alternative approach was considered to be more feasible whilst maintaining the integrity of the sampling process and achieving the aim of the research. Therefore, permission was sought from the HREC to produce a flyer for advertising purposes and utilise social media for distribution and promotion. A social media Facebook page was set up for the study to share this flyer (Appendix 1), with permissions set to public, enabling the researcher and others to share the advertisement widely. Participants who were interested in participating contacted the researcher directly via the email provided on the flyer. The researcher did not respond to potential participants via comments on the social media post. Waiting until the participant contacted the researcher directly was intentional, to ensure that participants were freely volunteering for the study of their own accord, and that communication between researcher and potential participant was never able to be viewed by the public. This was to eliminate any element of peer or social pressure that may occur when someone is tagged in a comment or post publicly.

Following this initial sampling method, it was determined that, of the first four interviews, only one was a multiparous participant and all had been involved in FIFO for a relatively lengthy amount of time. The researcher then utilised maximum variation sampling, which involves purposefully selecting participants to gain a broad view of the experience under study (Polit & Beck, 2018), to capture an authentic representation of the experience. The recruitment flyer was then reposted to the social media page, with specific information included identifying that the researcher was looking to include participants who had more than one child or who were new to the FIFO lifestyle, as well as those who met the original inclusion criteria. This method was used to ensure that relevant perspectives were represented in the data. This sampling resulted in more participants being recruited, including multiparous participants, but not participants who were new to the FIFO

lifestyle despite this attempt at maximum variation sampling. This limitation is further expanded upon in Chapter 5, the discussion chapter of this thesis.

In addition to the recruitment flyer and purposive sampling, snowballing recruitment was included in the research design. Snowballing recruitment "uses one informant to find another" (Streubert & Carpenter, 2011, p. 29) and this was intended to increase the diversity of experiences within the sample group increasing chances of capturing disconfirming cases by reaching women who met the criteria but who may not have had access to the original advertisement. It was also considered that some women may only have been willing to disclose their experience after someone they knew and trusted had been involved in the study. Despite these intentions, all participants who were interviewed were recruited via the online flyer, and no participants reported being referred by other participants.

Sandelowski (2000) asserts that the sample size for qualitative studies is relative to the study, and it is acknowledged that a common pitfall in qualitative research is ending data collection too early (Holloway & Galvin, 2017; Powers & Knapp, 2011; Sandelowski, 2000). Schneider et al. (2016) suggests that eight to fifteen participants is often adequate, but the number can vary widely outside of this and that there is no "formal criteria for determining sample size" (p. 127). Similarly, it is noted that there are no formal rules or criteria for determining data saturation (Holloway & Galvin, 2017). At the proposal stage of the study, it was estimated that up to 20 women would be interviewed within the study, although final sample size would be determined by the data, as data collection would continue until data saturation was reached. Data saturation can be defined as the point at which the sample is no longer producing new and useful data (Powers & Knapp, 2011), or "sampling to redundancy" (Holloway & Galvin, 2017, p. 152). Data saturation in qualitative research can be problematic, with some researchers believing that saturation can never truly be reached when exploring personal experiences (LoBionda-Wood & Haber, 2014). From a practical point of view, the researcher must make a judgement as to when saturation has been reached. A total of 10 women participated in this study. After interviewing eight participants, the researcher felt that the

data presented was being repeated, and no new useful information was emerging from the interviews. At this point, the researcher discussed and confirmed this repetition with the supervision team, by preliminary analysis of the data and review of the interviews. This definition of data saturation, of no new or useful data being produced (Powers & Knapp, 2011; Sandelowski, 2010), aligns with the descriptive aim of the research study, which sought to *describe* the experiences of participants, and *identify* enablers and barriers to breastfeeding in this group. To ensure completeness of data collection, a further two women were interviewed. Interviews were again reviewed, and further analysis identified no new themes or useful information. At this point the researcher pragmatically determined that data saturation had been reached, as the purposive sampling had provided a variety of participants, and even with this variety of experiences there was a lack of new useful information being provided by the data. This was discussed with the research supervisors who concurred with this rationale and data analysis. This sample size is supported in qualitative research as it was suitable to provide in-depth experiences on the phenomenon of study, which is of more importance than a large sample size (Holloway & Galvin, 2017). Further detail on the participants for this study is presented in Chapter 4, the Findings chapter.

3.2.3 Data Collection

Face to face interviews were used to collect data in this study as they allowed the researcher to build a rapport with the participant as well as allowing the researcher another opportunity to assure the participant that confidentiality would be maintained (Streubert & Carpenter, 2011). Interviews are a commonly used data collection method in qualitative research (Holloway & Galvin, 2017) and have even been labelled the “gold standard” of qualitative research (Silverman, as cited in Sandelowski, 2002, p. 105). Despite this, it is noted that the quality of data collection can be improved by the researcher utilising their own observations as well as the data provided during the interview (Holloway & Galvin, 2017). In this way, the researcher is able to take note of less tangible data such as the environment, the participants’ tone, body language, and apparent comfort during the interview rather than just their words, providing a richer insight into the data. For this reason,

the researcher (who conducted the interviews) made observational notes of the interview setting and the participant, as well as recording the interviews when engaged in data collection. The researcher utilised the observational notes to assist with contextualising the information and identifying meaning units within the data. The interviews were recorded with permission from the participants, and later transcribed into text for data analysis. Recording and transcribing the interviews allowed greater engagement with data by the researcher, as well as opportunities to check the accuracy of transcripts by comparing them with the recordings.

The interviews were semi-structured, which allowed participants to freely express and expand on topics whilst still allowing the interviewer a guide to cover the clearly defined topics (Cohen & Crabtree, 2006). Prior to conducting any interviews, and during the proposal stage, an interview guide was designed by the researcher, to ensure that the topics within the interview were addressing the research purpose. The interview guide contained open ended questions aligned with the aim and objectives of the study, including asking women to describe their experience of breastfeeding whilst their partner worked a FIFO roster, their breastfeeding intentions and previous breastfeeding experiences, as well as what supports they had utilised, and what they saw as helpful or challenging to their continuing to breastfeed. As the data collection was undertaken, the interviewer became more proficient in the use of prompts to aid discussion and was able to alter the guide slightly and as needed to follow new areas of interest that had arisen during previous interviews. This is common in qualitative research (Holloway & Galvin, 2017) where data are often analysed during the collection phase (Sandelowski, 2000), allowing the current data to inform changes to the continuing data collection. The initial interview guide and the demographic data sheet are provided in Appendices 2 and 3, respectively.

The interviews were conducted at a time and place of the participant's choosing, with the woman and her baby present. The majority of interviews were conducted in the participants' homes, although two participants nominated to meet at a café for the interview, and one in an outside park allowing her children to play during the interview. Participants were informed that they could have a

support person who was not their partner with them in the interview if they wished, however none chose to do so. (Streubert & Carpenter, 2011) note that participants may only "disclose what they think is socially acceptable" (p. 35). As such, a decision was made to not have the FIFO partner present at the interviews in order to allow participants to be able to freely express their thoughts and describe their experiences. The duration of the interviews was generally around one hour, with the shortest interview being 38 minutes and the longest 86 minutes. Spending this amount of time with the participants enabled them to feel comfortable and relate rich experiences, transitioning through the phases of the interview from building rapport to move past the apprehension phase and into exploration and cooperation between the interviewer and interviewee as described by Whiting (2008). The interviews were conducted in two stages over a total period of data collection of 18 months. This allowed for analysis of earlier interviews to inform further data collection and immersion of the researcher in the data collected, demonstrating prolonged engagement.

3.2.4 Data Analysis

Data analysis was conducted utilising the method of thematic analysis as described by (Braun & Clarke, 2006). These authors describe thematic analysis as a method, rather than a methodology, and note that this makes it a flexible tool for use across many disciplines and research designs (Braun & Clarke, 2013). Thematic analysis generates meaning from the data by identifying patterns (Braun & Clarke, 2012), making it suitable for the purpose of understanding the common experiences amongst the breastfeeding women in this study, rather than the individual. This method of data analysis aligns with the research design, with (Sandelowski, 2000) identifying that "qualitative content analysis is the analysis strategy of choice" (p. 337) in this setting, as it allows the findings to emerge from the data. The six steps of thematic analysis (as described by Braun & Clarke, 2006) are identified in figure 1 below. This method was chosen as it provided a flexible approach to qualitative data analysis whilst still providing a detailed account of the data, in keeping with the aim of the research and qualitative descriptive methodology. In addition, this method includes steps to ensure quality data analysis, in the phase of reviewing potential themes prior to defining them as well as

requiring data immersion (Braun & Clarke, 2013) to provide an in depth understanding. The rationale for choosing this method of data analysis was its alignment with the research method and aim.

Figure 1

Steps of Thematic Data Analysis

Note. Adapted from Braun and Clarke (2006). *Using thematic analysis in psychology.*

Verbatim transcripts of the audio recorded interviews were read by the researcher who made initial notes on ideas, and highlighted notable features in the data, allowing for familiarisation with the data in addition to having conducted the interviews. From this, meaning units were created as initial codes and as data collection and analysis continued, the researcher began to search for patterns of meaning from which themes were developed. These themes were continuously refined as analysis continued. Once the researcher had identified initial themes from two interviews, a clean copy of the interview transcripts was sent to the supervision team, who independently conducted their own thematic analyses of the transcriptions. The researcher and both supervisors then met to discuss their analysis, and this produced a consensus on the identified themes, confirming them and providing developmental guidance on the application of the data analysis method for the researcher. Following this, the researcher continued to analyse the data in this way, including a review of themes already created following the consensus meeting. As analysis continued, the themes were reviewed and refined, and any that were not adequately supported by data were discussed with the

supervision team and discarded or collapsed into existing themes as appropriate (Braun & Clarke, 2006). Once all interviews were analysed, the resulting themes and subthemes were reviewed again, first by the researcher and then by the research supervisors. This provided quality assurance to the data analysis, to confirm that the themes were cohesive and provided a clear and relevant picture of the experiences of the women, as well as the enablers, barriers and supports for them as identified from their experiences, ensuring findings were relevant to the research aim. Gaining consensus of the research team was also undertaken to ensure credibility of the findings, by having multiple people analysing the data to prevent idiosyncratic interpretations. Both members of the supervision team have expertise in midwifery, with one also having specialty experience in the area of child and adolescent health, hence this step also allowed the researcher and the team to compare the findings against a range of their own clinical experiences, to demonstrate credibility of the results (Polit & Beck, 2018). Further discussion of trustworthiness of the research is provided in the next section of this chapter. Upon completion of the data analysis, the themes were finalised and written up in the Findings chapter (Chapter 4). In this chapter, the findings are described and supported by participant quotes, increasing transparency and demonstrating authenticity of the findings.

3.2.5 Trustworthiness

Demonstrating rigour in qualitative research is essential to ensure that the research can be utilised in practice. Ensuring that the research undertaken is credible and of high quality is important, and in qualitative descriptive methodology, rigour is used to ensure that the participants' experiences are accurately represented (Streubert & Carpenter, 2011). It is not appropriate to measure rigour in the same way as quantitative research (Holloway & Galvin, 2017; Richardson-Tench et al., 2018) due to differences in methodology and the wide variety of methods and research designs that can be drawn upon to produce qualitative research. This does not mean that rigour cannot or should not be carefully considered and applied however, but rather that the methods utilised in order to demonstrate the quality of the research should be appropriate to the design and clearly identified.

Although there has been an increased focus on developing criteria and standards to address quality in qualitative research, the variances of methods as discussed above have meant that the applicability of these to individual studies can still be problematic, and in fact using a tool or checklist that is not tailored to the research can lead to less quality being demonstrated than if an individual approach was taken (Sandelowski, 2014). Colorafi and Evans (2016) identify that many qualitative researchers do not provide adequate information to address rigour in their studies, perhaps because of this lack of consensus (Sandelowski, 2014), or because researchers do not feel that it is as necessary or lack confidence in knowledge in how to do so. With regard to the participants of this study, as well as the families and practitioners for whom it will have relevance and implications, careful consideration has been given to ensuring rigour and the accuracy of the outcome. Miles et al. (2020) identify five issues to be addressed when assessing the trustworthiness and authenticity of qualitative research: objectivity, dependability, credibility, transferability and application (p. 311). The following section will detail the strategies that were implemented to ensure scientific rigour within this study, and therefore validity of the findings.

Objectivity. Objectivity may also be known as confirmability and refers to "relative neutrality and reasonable freedom from unacknowledged researcher bias" (Miles et al., 2020, p. 311). In order to demonstrate objectivity, the researcher took the time to reflect upon their own experiences and assumptions about the topic under study prior to undertaking any data collection, to limit potential bias. This reflexivity has been identified as a crucial element of quality in qualitative research (Johnson et al., 2020). The result of this reflection can be seen in the researcher positionality statement in Chapter One. An audit trail was maintained throughout the study (Lincoln & Guba, 1985) by clear description of the research design, data collection, and analysis, enabling the reader to clearly understand the process that was undertaken. Direct quotes from the participants are included throughout the reporting of the findings, in order to support the interpretations of the data and demonstrate confirmability (Polit & Beck, 2018). Doing so provides a level of transparency for the reader, linking the findings directly to the raw data.

Dependability. Dependability, or reliability, refers to processes put in place to maintain the quality of the study (quality control) (Colorafi & Evans, 2016; Miles et al., 2020). This was achieved in this study in a number of ways. Data analysis occurred congruently with data collection as per the qualitative approach (Colorafi & Evans, 2016), and this collection was undertaken in a consistent manner by utilising the pre-determined interview guide. The use of semi-structured interviews and an interview guide allowed for this consistency whilst still enabling the researcher to respond to trends in the data and revise the guide as necessary, which is an important aspect of qualitative research (Colorafi & Evans, 2016). In keeping with the novice experience level of the researcher, the study was also conducted under the supervision of two experienced scholars as part of a university-based research training program. This provided a "monitoring plan" (Colorafi & Evans, 2016, p. 23) to ensure that the focus of the researcher remained on the descriptive qualitative approach and did not stray into an overly interpretive analysis (Colorafi & Evans, 2016; Sandelowski, 2000).

Credibility. The credibility of a study can be plainly summed up by asking; "do the findings of the study make sense?" (Miles et al., 2020, p. 311). As identified, this study was completed under the supervision of two senior researchers, which allowed these researchers to validate findings (Colorafi & Evans, 2016). In addition to their identified research experience, each of the supervisors had appropriate clinical qualifications which allowed them to provide insight into the credibility of the findings according to extensive clinical experience. The duration of the data collection and analysis period demonstrates prolonged engagement with the data, enhancing the credibility of the research findings. Prolonged engagement with the data enhances credibility in qualitative research by allowing the researcher an appropriate amount of time to ensure authenticity and an adequate understanding of the data (Polit & Beck, 2018). Rushing data collection or analysis may lead to information being missed or themes not being accurately identified, which would detract from the findings of the study, as well as not adhere to the ethical principles of conducting research.

Transferability. Transferability refers to whether the findings of a study are relevant to other populations or areas (Colorafi & Evans, 2016). The nature of this small and specific qualitative study

may limit the transferability of the findings as can be the case with qualitative research. This has, however, been mitigated by a clear description of the study purpose, sampling, and participants to allow readers to determine if the findings are relevant to their area of practice (Colorafi & Evans, 2016; Powers & Knapp, 2011). The title of the research is also descriptive and specific for this purpose to assist with dissemination.

Application. Beyond documenting how the research has been conducted, consideration and discussion of how the findings will be applied is also an important element of conducting qualitative research (Miles et al., 2020) and adds to the trustworthiness and authenticity of the study. This was considered from the planning stage and reflected by the third objective of the study, which was to identify current and potential means of support acceptable to participants to assist them continuing to breastfeed according to Australian and international recommendations. The result of this objective has been the production of recommendations for clinical practice, as well as for future research in the area. These are expanded upon in the discussion chapter (Chapter 5) of this thesis.

3.2.6 Ethical Considerations

In all research, careful consideration must be given to ensure that a study adheres to ethical principles, and participants' safety is paramount. Polit and Beck (2018) relate the three main principles of protecting participants of research studies as determined in the landmark US Belmont Report (p. 79):

1. Beneficence (minimise harm and maximise benefits to participants),
2. Respect for human dignity (the right to full disclosure of information and the ability to self-determination such as refusing to participate), and
3. Justice (the right for fairness and privacy).

An ethics proposal for this study was submitted to the HREC at Curtin University for the non-low risk category. Upon review, it was decided by the HREC that the study was appropriate for the low-risk category and was moved to this process accordingly. Ethical approval for this study was granted on

19th January 2015, approval number RDHS-15-15. The ethical considerations that were undertaken for this study will now be outlined and discussed.

Participants were provided with verbal and written information on the study, as well as an initial phone call from the researcher during which the participant had the opportunity to ask any questions prior to becoming part of the study. In this phone call, the researcher also had the opportunity to reiterate the voluntary nature of the study, and that the participant was free to withdraw from the study at any point, with no adverse impacts upon themselves. Information provided to the potential participant included this clause, as well as identifying the confidentiality of the information collected, and that the findings would be represented in a non-identifiable manner in the results. The study information also clearly outlined that the researcher, as a Registered Nurse and Midwife in WA, was legally mandated to report any reasonable belief of child sexual abuse as per the Children and Community Services Act 2004 (Western Australian Department of Communities Child Protection and Family Support, 2008). Once participants had received this information and agreed to participate, written consent was gained. Both the study information sheet and the consent form are provided in Appendices 4 and 5.

The interview and demographic data were de-identified prior to analysis, by replacing the participant's name with a number (i.e. Participant 1, Participant 2, etc.). The audio recordings of the interviews were destroyed, and transcribed data will continue to be stored in a secure environment provided by Curtin University for a minimum of seven years post public release of the data, as per the Curtin University Research Data and Primary Materials Policy (Curtin University, 2014). A Data Management Plan was created for the study to enable the data to be stored on Curtin's Research Drive, allowing the researcher to confidentially store data in a folder with restricted access (Curtin University, 2014). Access to the information was limited to the researcher and academic supervisors only.

An adverse events reporting plan was developed for the study, as required by the HREC. In addition, should an adverse event occur, the interview would have been immediately ceased. Participants would have been provided access to counselling via the Wellbeing services provided by Curtin University. An adverse event is defined by Curtin University (n.d.) as "any unforeseen or unexpected outcomes that have a negative impact on participants, researchers or Curtin's reputation" (https://students.curtin.edu.au/essentials/higher-degree-by-research/ethicssafety/human/maintain-approval/). Additionally, "unanticipated problems" were also to be reported to Curtin University if they met specified criteria including an increased risk of harm, being of an unexpected nature, and being caused by or related to the study (https://students.curtin.edu.au/essentials/higher-degree-by-research/ethics-safety/human/maintain-approval/). No adverse events or unanticipated problems were experienced or reported during or following this study.

The researcher at all times abided by the WA Department of Health Home Visiting Safety Policy (WA Department of Health, 2015), as interviews were conducted at a time and place of the participants' choosing, which was often their own home. This was to fit in with the routine of the participant and her baby and cause minimal disruption to their life, as well as to facilitate a safe environment. A support person was also able to be present during the interview for this reason.

3.3 Conclusion

This chapter has identified and provided a rationale for the research design and methods implemented within this research study. A qualitative descriptive study was chosen as appropriate to the aim of the study, which was to identify the experiences of women who were breastfeeding whilst their partner worked a FIFO roster. The previous lack of research related to this topic meant it was best suited to an exploratory approach, and the objectives of identifying the experiences, as well as enablers and barriers, led the research team to a descriptive qualitative approach. Cross sectional data collection was undertaken via semi-structured individual interviews. Audio recordings of

interview data was transcribed into text for analysis utilising a thematic analysis approach as described by Braun and Clarke (2006). Consideration was given to ensuring the safety of the participants, and ethics approval was gained prior to commencing the study. Trustworthiness was used to maintain the rigour and quality of the study. This enabled the study to accurately reflect the experiences of these women and ensure that the findings met the aim of the study. The following chapter will present the findings within the identified themes and subthemes that emerged from participant recounts of their experiences.

Chapter 4 - Findings

Thematic analysis was utilised in this study to analyse the interviews of ten women who were currently breastfeeding whilst their partner worked a FIFO roster. The aim of the research was to identify, from the women's perspectives, the enablers and barriers to their continuation of breastfeeding, specific to the FIFO living situation. The purpose of this study was to provide insight into this unique population to facilitate a better understanding of their circumstances and challenges, and to provide appropriate recommendations for breastfeeding support. The three objectives for this research were to:

4. Identify and explore the experiences of breastfeeding women with FIFO partners;
5. Identify, from the women's perspectives, the enablers and barriers with regard to the continuation of breastfeeding;
6. Describe the current support utilised and potential means of support acceptable to participants to ensure that they continued breastfeeding according to the Australian Government and World Health Organization recommendations.

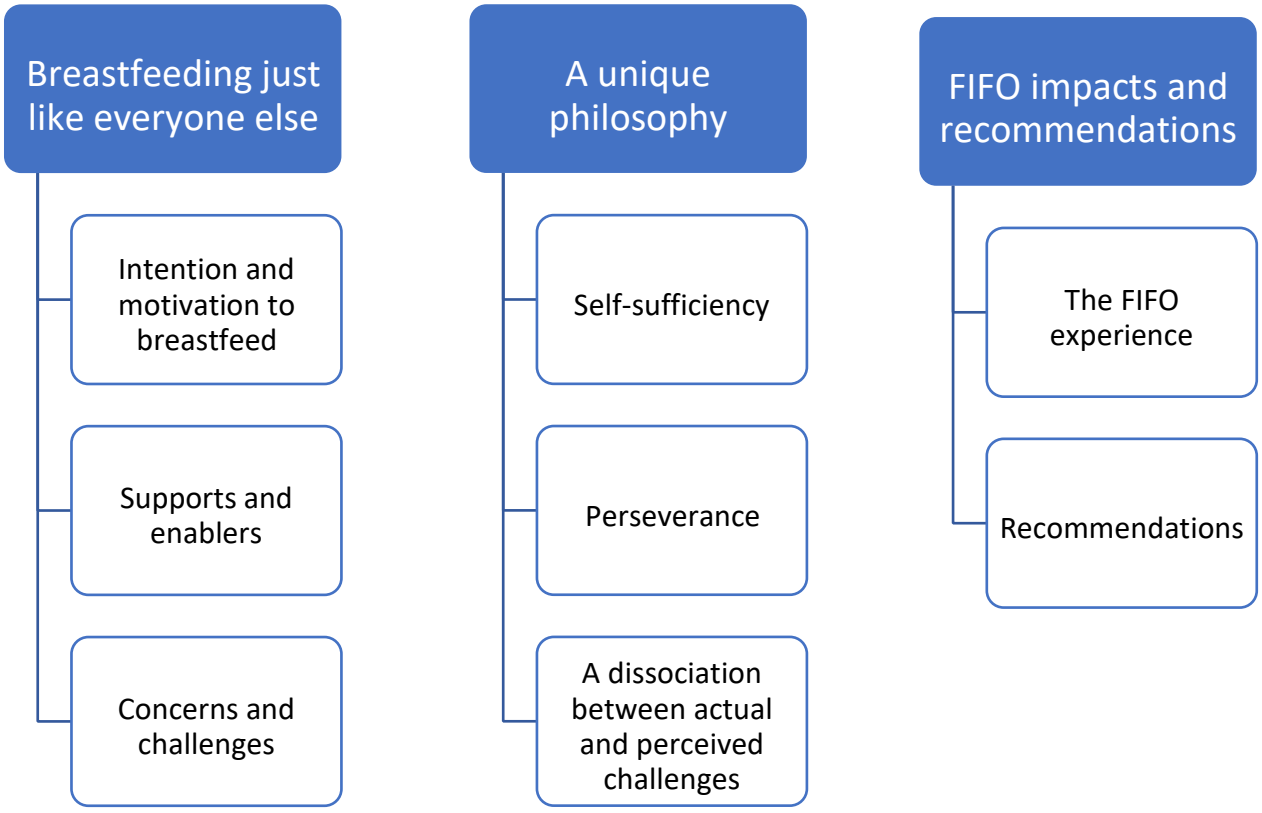
It was anticipated, leading into this project, that participants would experience unique challenges or barriers in their breastfeeding journey directly arising from the FIFO lifestyle and its impact on the family. This research provided women with an opportunity to express their experiences of breastfeeding, highlighting challenges and successes aligned with the impact of their partners' FIFO employment. It was anticipated that this would allow for discussion of appropriate recommendations to enable healthcare provider support of breastfeeding women living in a FIFO arrangement. It became clear quite quickly, however, that this would not be the case. The women did not identify FIFO as a separate construct, but rather that it was their normal, and therefore they often did not explicitly consider its impact on their breastfeeding experience. Because of this, organic conversations were held about the women's experiences of maintaining breastfeeding whilst their partner worked a FIFO roster, and implicit associations were unpacked by the researcher to identify

themes and links between the breastfeeding experience and the FIFO lifestyle. During the interviews women were asked how FIFO had impacted their breastfeeding and if they had any recommendations for supports that they may have benefitted from, however often they struggled to identify this or provide recommendations for the reason identified above. Where participants were able to identify or describe specific experiences arising from FIFO and its impact on their breastfeeding, or recommendations, these are presented separately within this chapter.

Thematic analysis of interview responses identified three main themes: “Breastfeeding just like everyone else”, “A unique philosophy”, and “FIFO impacts and recommendations”. These themes with their linked sub-themes are shown in Figure 1 below and each is described and explored in this chapter. Researcher interpretations are supported by verbatim participant quotes (in italics) from the data, helping to preserve the participant voice.

Figure 1

Visual Representation of Themes and Associated Subthemes



4.1 Participant Characteristics

A total of 10 participants were interviewed in the course of this study, representing both primiparous (n=6) and multiparous women (n=4). One woman stated that she worked two to three days per week, and the rest of the participants worked no more than two days per week. The mean duration of FIFO employment was 5.75 years. The family newest to FIFO had been employed in a FIFO capacity for two years, and the longest for 11 years. Rosters also varied, from 4 days on and 3 days off, to 4 weeks on and 4 weeks off. One participant had their highest completed education level of year 12, one a TAFE qualification and the remaining participants had a university education of a Bachelor qualification (n=4) or higher (n=4).

4.1.1 Table 1

Participant Characteristics of Children, Education, FIFO Roster, and Length of FIFO Employment

Participant	No. of children	Highest completed education	FIFO roster	Length of FIFO
P1	1	TAFE	6(d) / 6(d)	~ 2.5 years
P2	1	Postgraduate	8(d) / 6(d)	~ 7 years
P3	1	Bachelor	8(d) / 6(d)	~ 3 years
P4	1	Bachelor	8(d) / 6(d)	~ 4 years
P5	3	Postgraduate	2(w) / 1(w)	~ 4 years
P6	1	Bachelor with honours	4(w) / 4(w)	~ 11 years
P7	1	Postgraduate	4(d) / 3(d)	2 years
P8	2	Year 12	14(d) / 9(d)	7+ years
P9	3	Bachelor	2(w) / 2(w)	7 years
P10	2	Postgraduate	2(w) / 2(w)	~ 10 years

The majority of participants were aged 30 – 37 years, with the oldest participant being 42 years of age and the youngest 24. Their methods of birth varied - three women described a “natural” birth (which was not defined beyond being a vaginal birth), whilst five had an induction of labour, and one had a planned caesarean section. Four of the inductions resulted in unplanned birth interventions including two emergency caesareans and two instrumental births (i.e., vacuum or forceps were used). Half of the participants were working at the time of data collection, and each of these participants worked part time only.

4.1.2 Table 2

Participant Characteristics of Age, Method of Birth and Current Employment

Participant	Age	Method of birth	Current employment
P1	32	“Natural” birth	N/A
P2	27	Vaginal birth	2-3 shifts/ week
P3	28	Augmented, instrumental vaginal birth	No
P4	35	Induced -> non-elective caesarean birth	A few hours a week from home
P5	35	Induced vaginal birth	2 days/ week
P6	35	Instrumental vaginal birth	1 hour/ week when husband home
P7	30	Induced vaginal birth	2-3 shifts/ week
P8	24	Non-elective caesarean birth	No
P9	42	Caesarean birth	No
P10	37	Vaginal birth	Maternity leave

4.2 Theme 1 – Breastfeeding Just Like Everyone Else

When discussing breastfeeding specifically, women expressed an intention and a motivation to breastfeed, as well as describing partner, family and peer supports. Women also experienced concerns about their ability to breastfeed, and/or the public perception of breastfeeding. The normalisation of breastfeeding in most women's lives was also discussed. Findings from this theme generally aligned with breastfeeding experiences of the general population, and the title of this theme reflects this similarity.

4.2.1 Intention and Motivation to Breastfeed - I Knew That I Wanted to Breastfeed

All participants expressed that they had intended to breastfeed their baby as the preferred method of infant feeding. This decision was made antenatally and was aligned with several motivations. Most women (seven) stated that they wanted to breastfeed because they were aware that it was the optimal form of nutrition for the baby.

"I'm like I know this is good for her, it's good for me." (P3)

"… the best thing that's for him is my breastmilk." (P8)

Other motivations mentioned included perceiving breastfeeding as an easier option than bottle feeding and previous successful breastfeeding experiences. Convenience was cited by primiparous as well as multiparous women, and often participants mentioned more than one motivation for breastfeeding.

"Convenience. I just find it convenient. It's my go to and you know maybe there's an element of me that's lazy, 'cause the thought of. But you know the thought of sterilising bottles and carrying all that stuff, it underwhelms me." (P5)

"I guess as well having breastfed the first, the second one, like you don't even really think about it you just do it." (P10)

Two women described breastfeeding as difficult or more difficult than bottle feeding, however their motivation to breastfeed was of more importance to them, which enabled them to continue despite their challenges, such as described by participant 8 below.

> *"But he was just very skinny, and I was worried that if he was sick again there's nothing for him to lose so I kept on breastfeeding just for you know the health benefits. … Lots of tears in my behalf." (P8)*

Positive intention to breastfeed characterised the cohort. All women who were interviewed identified that they had made the decision to breastfeed their baby during their antenatal period. The motivation for doing so varied but generally included the knowledge that breastfeeding was the best form of nutrition for their baby. Some women described multiple motivations for breastfeeding.

4.2.2 Supports and Enablers - …They Were Just So Supportive

Every participant described a form of support for their breastfeeding. Types of supports were practical and emotional, and were mainly provided by partners, family members (such as mothers and sisters), peers (friends, support groups and online forums) and professional services. Generally, women had more than one type or source of support, but this was not always the case. In the interviews, participants often had difficulty defining the type of support they received, with emotional and practical support often seen as one and the same thing. The types of support mentioned were delineated during data analysis to provide a more defined picture of specific needs and factors that affected their breastfeeding. It is important however to read this within the context that was provided by participants: support was support and perceived as helpful regardless of the form it took. The reader is encouraged to proceed bearing this in mind.

Partner Support. Eight of the ten women identified that their partner was supportive of their decision to breastfeed. This decision may have been made jointly by themselves and their partner, or their partner may have simply supported their choice to breastfeed, and both were seen as positive by the women. Women also felt that their partners were supportive of their breastfeeding in other

ways, such as practical support when they were home, and emotional support. Practical support was usually entwined with emotional support in women's descriptions of partner support.

> *"You know just gentle reminders that I'm doing a good job. Things like bringing me nipple cream and breast pads, you know just the practical things." (P5)*

> *"… Having him to kind of prompt me, oh is time to feed? Do you want me to get anything, do you want me to change her? Do you want to manoeuvre your top so you're comfortable and I'll hold the baby." (P3)*

Family Support. Eight out of ten women also identified that they were supported by their extended family. Usually this was mothers (seven participants) and/or sisters (two participants). The type of support described by the women from their families was again both practical and emotional, with varying degrees of each across participants.

> *"My family is very supportive, so after I gave birth my mother cooked all of my meals, came over cleaned the house, and was yeah between every second and third day for the first 7 or 8 weeks after the birth." (P6)*

> *"My mum's retired so… Yeah she's very helpful when he's away. Just help around the house, and just you know… you know ring if I need anything from the shops and things like that…" (P1)*

As with partner support, practical help was usually interpreted as emotionally supportive and often intertwined in the responses. One woman described how having a supportive family built her own self-confidence in her ability to maintain breastfeeding.

> *"If they think I'm strong enough to overcome this then I can do it." (P7)*

This further demonstrates the importance of having supportive people around a breastfeeding mother, and the many ways in which this can translate into breastfeeding efficacy and continuation.

Peer and Professional Support. Women chose to seek support outside of their family by making appointments with health professionals or accessing peer support, generally via mothers' groups or online via Facebook groups.

> *"I am on a Facebook group, the natural parents. And there's a lot of people on there who have done extended breastfeeding, who have done tandem breastfeeding with different age babies and breastfeeding continuing through other pregnancies. And they have a lot of information linked to different articles about the benefits of breastfeeding and, you know, experiences with breastfeeding." (P6)*

Participants often reported seeking breastfeeding support and advice from midwives or lactation consultants, both whilst in hospital postnatally and afterwards. This proactive approach seemed to be linked to an awareness of their own needs and preparation for their unique circumstances of having reduced support at home due to the FIFO roster.

> *"I joined the Australian Breastfeeding Association so I would have had that help available when he wasn't around, that was it." (P7)*

One participant described preparing before leaving the hospital for being on her own while her husband went FIFO:

> *"Like if I can get as much information out of people that do it for a living then that'd help. And I'm trying to be as organised as possible in my head." (P3)*

Participants identified accessing some form of professional or organised support services for their breastfeeding, including midwives (four participants), the Australian Breastfeeding Association (three participants), lactation consultants (two participants), antenatal breastfeeding education service (two participants), child health nurses (two participants), and doulas (one participant).

A common example of accessing support was attending mothers' groups. "Mothers' groups" generally refer to groups for new mothers within a geographical location, organised and run by the

local child health nurse (CAHS, 2019). These groups provide support and advice on early parenting and provide an opportunity for women to meet other new mothers in their area, as well as to have contact time with the child health nurse. All new mothers who attend their local child health centre are offered a group to attend. Six women identified attending mothers' groups, and responses were mixed. Findings related to negative experiences are discussed in section 1.3: Concerns and Challenges. Three women found them supportive and developed a good relationship with their peers:

> *"I'm the only one in my mothers' group that does have a FIFO partner. And they were all really, really helpful, you know? Anything that I needed … so if he's ever away and you need some company, no, things like that." (P1)*

One participant stated that she found a Facebook group to be supportive of her breastfeeding, with like-minded peers sharing information and advice. However, of those who mentioned that mothers' groups were a positive experience, no participants directly identified these groups as a source of breastfeeding support but instead support was related to the broader context of being a mother.

Normalised Breastfeeding. Participants generally expressed that breastfeeding was the norm for them or their extended family. Having other women around them who were breastfeeding was identified as helpful and supportive in their own breastfeeding, whether this was family or friends. Seeing others breastfeed or having experienced it within the family generally led to confidence and a feeling of support related to breastfeeding, and women conveyed this normalisation of breastfeeding as a supportive factor in their breastfeeding journey.

Eight out of ten women interviewed identified that they had been exposed to other people breastfeeding prior to their own experience. Having a mother who had breastfed was mentioned by four of the ten women, who described this as a factor in their decision to breastfeed themselves, or

as a source of support in their own breastfeeding. Other women described a culture of breastfeeding within their family, with a similar result.

> *"Well, my mum breastfed three until they weaned." (P10)*

> *"I think because I've grown up around breastfeeding, I've never known any different." (P5)*

Friends were another source of exposure and support for breastfeeding. Four women identified that they had friends who had or were breastfeeding, and that this was both reassuring and a source of support.

> *"I've got quite a few friends that you know breastfed past, I don't know when people stop, whenever people stop. You know they kept going, and so you kind of get reassured that it's ok to you." (P10)*

Most of the women interviewed had been exposed to other women breastfeeding. Their descriptions of this indicated that this was a source of confidence and indirect support for themselves in their own breastfeeding journey.

Participants demonstrated enablers to their breastfeeding and described accessing a range of supports available. Supports and enablers that were described included partner, family, and social support, as well as professional or organised services. Although the women all described factors that were supportive for them to continue their breastfeeding, they also reported multiple concerns and challenges on the topic of breastfeeding which is described next.

4.2.3 Concerns and Challenges - … Some Were More Helpful Than Others

Although demonstrably highly motivated and capable, most participants experienced some concerns around breastfeeding. These included apprehensions or negative experiences related to unsupportive or negative perceptions held by others about breastfeeding, or concerns that they have previously held, such as worry antenatally that they may not be able to breastfeed successfully.

These issues described by the women represented a challenge to be overcome in breastfeeding and are presented in this section.

Concern about Ability to Breastfeed. Nine out of ten women interviewed highlighted that they had some level of concern antenatally about their ability to successfully breastfeed. This was based on their general experience or understanding of breastfeeding and ranged from a vague sense of knowing that some people were not able to breastfeed, to anxiety and apprehension about their own ability to do so.

"I had huge concerns about not being able to breastfeed." (P1)

"I had this idea that I'll try to breastfeed, but I didn't want to get too excited about it 'cause I've seen so many people fail." (P7)

Within these descriptions it was clear that this concern had an impact on their intention to breastfeed – it was usually mentioned within the context of a reservation or a caveat to their intention to breastfeed their baby, although it did not seem to affect their motivation. Beyond this concern about their own ability, participants also expressed concern and anxiety about what others would think and how they might react to their breastfeeding.

Unsupportive Peers and the Perceptions of Others. Seven of the ten women expressed concerns about others' perceptions of breastfeeding. Additionally, women had often experienced unsupportive or negative comments about their breastfeeding directly from peers.

The context of these concerns about others' perceptions of breastfeeding ranged from the perceived appropriate age limit for breastfeeding children, parenting associated with continued breastfeeding such as habitual feeding for comfort, and sexualisation of breasts.

"But they're like oh he'll get used to it and you'll never get him off and all that." (P10)

"They were very much oh you know your boobs are for you and they're for your husband and they're not for the baby and you know I remember when my first daughter was maybe three months old and they're like, oh are you still doing that? Aren't you bored of it, or don't you want your life back?" (P5)

Women also reported feeling concern that breastfeeding is not well supported by the general public for similar reasons. This apprehension generally resulted in some level of anxiety about breastfeeding in public.

"So, when we first would go out to cafes, I was quite nervous about feeding in public." (P4)

"I haven't had anyone you know, kind of come up to me and say oi, you know, put that away. But I have heard of other people that it's happened to." (P6)

As well as feeling that the public perception is not supportive of breastfeeding in general, some women mentioned specifically that the older their babies were, the more negative comments became, or that they felt increased pressure about continuing to breastfeed.

"Because once you get, as she gets older it becomes less supportive." (P7)

"She was 10 months … so she was feeding five or six times a day, and how a lot of people were still surprised that I was obviously still feeding her so much." (P3)

Conversely, some women also described contrasting pressures around breastfeeding, including that it should be a very positive and easy experience and a pressure to be successful, as well as that formula feeding was not in the baby's best interests.

"So yeah, the pressure to succeed is, you know, full on." (P1)

Participants often experienced concern or felt pressure from others' perceptions of breastfeeding. Some directly experienced unsupportive or negative comments, whilst others had a view that breastfeeding was not well supported in public. Contrastingly, some women felt a pressure to be

successful at breastfeeding which caused similar concerns or anxieties. It can be seen that the majority of participants felt some external pressure surrounding their breastfeeding, which constituted a challenge or barrier that needed to be addressed and overcome in order to continue to breastfeed.

Inconsistent or Negative Experiences with Professional Services. Although the data demonstrated that women accessed a variety of providers and services for breastfeeding support, it was also identified that in some instances these did not provide the support anticipated or resulted in negative experiences. Participants described several instances of accessing services that resulted in a lack of support or additional challenges to their breastfeeding.

Three women specifically described receiving inconsistent messages from healthcare providers, or negative experiences when accessing these services. One woman described having an unsuccessful experience with her child health nurse, *"She was just a space case" (P3)*. This participant stated that she stopped engaging with this child health nurse, and instead sourced an alternative on her own.

> *"I randomly went into a chemist up at XX [name of shopping mall] and they had free weigh…*
>
> *And I met this lovely, lovely South African midwife lady and she's the most helpful woman I've ever met. Like she was a hundred times more helpful than the child health care nurse that were allocated to our area. She was just not only the breastfeeding but everything to do with the baby... I regularly found her." (P3)*

Health care providers who were mentioned as providing negative or inconsistent messages were not confined to one profession or area of support, but included midwives, child health nurses, general practitioners, and lactation consultants.

> *"So, I brought it to the attention of you know our local GP and as long as he's meeting their milestones they don't really care." (P8)*

"That it took quite a few visits to doctors and lactation. I found a lactation consultant wasn't very helpful." (P10)

As discussed earlier in this chapter, mothers' groups are an organised support for new mothers, facilitated (at least initially) by the local child health nurse. Although some women found their mothers' group to be a positive and supportive experience, an equal number of women described negative experiences in relation to their group. These experiences included negative emotions, judgemental attitudes, or differing values expressed by attendees of the group.

"I was really surprised there was internal stigma in my mothers' group, with ladies who were breastfeeding were having a go at mothers that were formula feeding, and I was really disgusted." (P3)

Although participants described experiencing and accessing a wide variety of services for breastfeeding support, a theme emerged of inconsistent or unhelpful encounters with professional services. Some women identified these as explicitly negative experiences, whilst others alluded to this only. These experiences demonstrate another challenge or barrier faced by breastfeeding women.

This theme has presented women's experiences of breastfeeding. Although women were asked about their breastfeeding experiences whilst their partner worked a FIFO roster, responses generally did not include discussion of FIFO, as this was the norm for the women rather than a factor on its own. Participants described an intention to breastfeed their baby as a preferred method of infant feeding, as well as motivations to continue breastfeeding despite any concerns or challenges that arose. Women demonstrated an ability to access a wide range of supports in their breastfeeding journey, including partner, family, and peer support as well as health professionals and organised services. Despite their willingness and ability to access supports, many women described concerns or challenges around breastfeeding specifically, as well as some negative experiences with support providers.

4.3 Theme 2 - A Unique Philosophy

The most striking theme emerging from the thematic analysis was not in-depth descriptions of unique circumstances, or major difficulties with managing breastfeeding and the FIFO lifestyle, but the philosophy of the women who were interviewed. A philosophy can be defined as "A theory or attitude held by a person or organization that acts as a guiding principle for behaviour," (lexico.com/definition/philosophy), and this concept has been chosen to describe the set of characteristics and attitudes demonstrated by the women in their interviews. This theme has been derived not from *what* the participants have described, but rather *how* they have described both themselves and their experiences. Interview responses indicated resilience, perseverance, and self-efficacy, combined with self-sufficiency, flexibility, and a high level of motivation. One of the most interesting finding that emerged was the dissociation between their own experience and challenges or difficulties that they faced. These attitudes were not specific to any one topic and for this reason it has been presented as a separate theme. The following subthemes will present these attitudes and expectations in further detail and demonstrate the participants' unique worldview.

4.3.1 Self-Sufficiency - … If I Want Help, I'll Ask for It

Seeking Own Resources. The women interviewed seemed to demonstrate a high level of motivation and self-efficacy in accessing their own resources as needed, and in utilising this knowledge for the good of their breastfeeding and their family. This seeking of resources included both information and support.

A range of informational sources were utilised by study participants, from blogs to research, and articles from scientific bodies such as the WHO. Participants also displayed a confidence in their own knowledge when discussing their actions.

"I guess reading Pinky McKay's blog … I find her quite helpful so, like I follow her on Facebook." (P3)

"I chose it because I know that midwifery care produces better outcomes than obstetric care because more evidence based in my choices. So, I just looked at the evidence of that. In regards to outcome breastfeeding." (P7)

Participants were not only willing to seek information but also appeared confident in their own ability to determine when they needed help, as evidenced by plentiful descriptions of seeking and accessing support for their breastfeeding. This self-efficacy was a recurring trait demonstrated amongst the cohort.

"I can use information and work stuff out." (P10)

"I've just got to research and do my own thing." (P8)

"I did ring her, when she wasn't my midwife anymore, I rang her and said I've got a cracked nipple and I got a bit of advice from her." (P7)

Women who were interviewed demonstrated a willingness and self-efficacy in seeking and utilising information and resources to support themselves in their breastfeeding journey. Beyond seeking information, women also described accessing a range of supports from professional to peer supports as described in the theme above, further demonstrating self-efficacy and a high level of motivation. The self-efficacy described moved beyond the ability to source their own resources, to a confidence in selectively choosing which supports to access or to continue to engage with for their own benefit.

Selectivity in Utilising Supports. Participants described various methods of seeking and accessing support for themselves in their breastfeeding journey, from information, to peer support, to professional services. Concurrently, instances of disengaging from supports were also mentioned, both in the context of services and peers. Women generally chose to disengage with resources because they did not find them useful or chose not to access them at all if they felt that they did not

need them. This demonstrated a selectivity in utilising supports that enabled them to receive what they needed to continue breastfeeding and limit barriers or challenges faced.

As identified in discussions of mothers' group experiences, one such example is discontinuing attendance when these groups were found to be unsupportive or unhelpful. *"Yeah, there's a mothers' group but I stopped going 'cause I found them… yeah they were just saying pretty unhelpful things." (P4)*

Other examples of choosing not to engage in supports included unsuccessful interactions with the local general practitioner or child health nurse. When faced with these situations, women reported simply not going anymore, or finding alternatives. This demonstrated a high level of confidence in understanding their own needs and situation and, determining what resources would be beneficial in enabling them to achieve their goals.

Selectiveness in accessing useful supports and leaving others was demonstrated beyond professional services as identified previously, to include peers in some instances. Several participants described unsupportive comments or attitudes from friends and family regarding their breastfeeding, parenting, or FIFO choices, and responded by reducing contact which they perceived as unhelpful or unnecessary.

> *"Yeah, just find a new village." (P5)*

> *"I think about that and now I think oh that's so stupid. But yeah, to find people whose values align with your own." (P10)*

The participants displayed insight into their own needs, and if they felt that the attitudes of those around were not beneficial, they were able to determine this and limit or remove themselves from this. In doing so, the women displayed self-efficacy in selecting appropriate support for themselves and their circumstances.

Beyond disengaging with unhelpful supports there were many instances in which the women chose not to access particular resources at all. An attitude of self-sufficiency was noted across participants as a characteristic common to the cohort. Sometimes this was linked to a selfprotective reasoning similar to leaving mothers' groups. An example of this is one participant's explanation on why she did not choose to access FIFO specific communities:

> *"No because I don't really want to hear the constant like, oh this is such a hard life. Like no one knows how hard it is. Yeah, so I just avoid that... And a lot of women haven't been doing it as long as I have, and I just hate the ones who complain about it." (P8)*

Declining or avoiding unhelpful supports was not the only reason noted for this phenomenon. For instance, several participants identified that they had supportive family, but would not willingly ask for help. This finding aligns with the self-sufficiency seen throughout the interviews. For some women, this reluctance to seek or accept support from those around them seemed to be linked to the actual or perceived stigma of choosing FIFO.

> *"If that happened [family became unwell] I wouldn't probably call anyone I'd just get through that myself." (P9)*

> *"But yeah, I think there is that oh you get paid the money so you make the sacrifice, so don't whinge about it you know kind of thing." (P 10)*

Interestingly, no participants in this study had accessed FIFO specific supports, although most were aware that they existed.

> *"I think they do. To be honest, I don't really, because he works for BHP and I'm pretty… they're quite good with family support. It's just that we haven't needed it, so I haven't really looked into it, exactly what it is they offer." (P1)*

One participant noted following a FIFO support group on Facebook but did not attend any gatherings in person.

"No, I'm a member of like FIFO families and stuff on Facebook, but I mean I don't ever go to any of the meets anyway." (P4)

Reasons for not accessing FIFO support varied from feeling that it was unnecessary because they had their own support outside of this, to being unwilling to commit time or money to such a resource.

"I did look at one stage and saw that there was some sort of FIFO support network, but yeah I had other support elsewhere so I didn't really feel the need to join up." (P6)

"To be honest I don't know much about it at all [FIFO Families]. I don't know if I would have the time to be." (P9)

"…that was going to cost a certain amount per year to join." (P6)

Remarks from other participants provide some insight into this attitude, displaying a sentiment that they should deal with whatever comes on their own as a consequence or responsibility for their own choices (specifically to engage in a FIFO lifestyle).

"It's hard and sometimes it's painful and sometimes it's stressful but it's very rewarding and you know it's good to ask for help when you need it, but you also need to … if you're big enough to have child then you're big enough to, you know, try and nut it out yourself I think." (P5)

"But that's what we chose, we can't complain about that at all and I'm not." (P9)

Beyond simply the selection of accessing resources, the participants were characterised by an independent outlook on life and seemed comfortable in their ability to manage their obligations of family and daily life on their own. This did not negate that they often expressed challenges to being on their own, but rather they were able to work through these. Some participants identified explicitly that they felt this was in their nature as a person, while others felt that previous life experiences had helped shape this about themselves.

"But I think the biggest thing that got me through which I think helped, 'cause I worked in the mining industry prior to having XX [baby's name] …And so being quite a, I suppose routine industry that, that helped heaps. Like those nights that you did need support you've just got to run through your head alright well she's not wet, she's not hungry, oh no, we'll try and feed her again and it was just lucky that that seems to calm her down regularly." (P3)

Whatever the reason, this self-sufficient attitude pervaded the interviews, and can be summed up nicely by one participant's statement:

"I guess I'm always inclined to work it out myself." (P8)

Participants in general seemed very comfortable in their own ability to seek resources when needed and demonstrated a reluctance to utilise what they did not feel was helpful, necessary, or perceived as not being entitled to. This self-sufficiency is deeply intertwined with a resilience and flexibility to adapt and respond to challenges and the journey of breastfeeding and parenting whilst living a FIFO lifestyle. This leads inevitably into the next theme identified, *"I just deal with it",* in which these characteristics are described and explored.

4.3.2 Perseverance - … I Just Deal With It

Participants seemed to demonstrate perseverance and resilience to any challenges that they encountered, and this was evident throughout the interviews. Their ability to implement this was uniformly present, however the ways in which participants did so was varied. Irrespective of how the women approached challenges and difficult situations, the cohort as a whole demonstrated a quality of perseverance, an ability to adapt, and a resilience that enabled them to continue breastfeeding whilst living a FIFO lifestyle. These approaches are explored within this subtheme.

Flexibility, Adaptability, and Resilience. An attitude of flexibility was consistently demonstrated by participants in their responses to challenges that they encountered, and an ability to adapt to their circumstances to achieve their desired goal of coping with the demands of

breastfeeding and living a FIFO lifestyle. This could be seen in women's recounts of their antenatal decisions to breastfeed, through to coping with life following the birth of the baby.

When describing their intention to breastfeed, some participants described a flexibility in their overall goal, which enabled them to pursue this without excessive pressure to do so beyond what they chose to put upon themselves.

"Yeah, so I didn't want to put too much pressure on myself and go I must breastfeed." (P3)

Other women were characterised by a single-mindedness and determination that did not allow for consideration of options beyond what they had chosen. That is, if they had chosen to breastfeed, then they would breastfeed regardless of the challenges faced.

"I wasn't open-minded, I'm still not. Breastfeed." (P8)

"I was always adamant that I was going to do everything I possibly could to exclusively breastfeed." (P6)

These attitudes would inform participants' responses to challenges after the baby was born and meet the needs of breastfeeding while living a FIFO lifestyle. Again, some women displayed flexibility in their goal, whilst others displayed flexibility in their actions but not their overall goal.

"So, I guess I just played it by ear, I just naturally assumed that would be my go-to option and if that didn't work after some perseverance, I would try another option." (P5)

Regardless of the approach, single-minded determination or a more laisse fair attitude, every woman expressed their antenatal intention to breastfeed. The women displayed varying methods that overall demonstrated a perseverance and a resilience, enabling them to be flexible and adaptable to meet their goal of maintaining breastfeeding. These same traits are demonstrated in their ability to cope with challenges they were faced with and are discussed in the next section.

Coping with Challenges. The perseverance and resilience described above, in combination with what appeared to be self-sufficiency and self-efficacy displayed by the participants, meant that they were uniquely positioned to cope with any challenges that they faced. Most women described some challenges or difficulties which were either directly related to breastfeeding (such as mastitis, painful latching) or indirectly affected their breastfeeding (such as caring for other children's needs whilst their partner was away). Their resilience was evidenced by the fact that each of the participants were breastfeeding at the time of the data collection for the study.

The attitudes and characteristics that enabled them to cope with challenges have been described above. Another factor recurring throughout the data was that participants often developed strategies to meet their goals. In some instances, this was intentional, and in others this was a more organic occurrence as a result of their attitude when faced with an obstacle.

One example of implementing strategies was not considering an alternative to their stated plan. This was characterised by a lack of willingness to consider other options.

> *"…she said I should come up with a plan of what I was going to do if I couldn't do it [breastfeed] and I never really did come up with a plan 'cause I thought if I come up with a plan that's my escape route you know. So, if I don't have a plan I've just got to get on with it." (P4)*

> *"I didn't have a plan B, no because I just wanted to do that." (P9)*

Whilst this worked for several women, another described preparing for an alternative to breastfeeding as a means of motivating herself to continue breastfeeding. She described buying formula:

> "*It was almost like an insurance policy for me. I don't know why, 'cause I didn't really have any intention of using it but I just thought if I've got it there that will remind me about how much I don't want to use it. And yeah, keep me on the right track." (P5)*

Other women described more flexibility in both their goal and their way of meeting challenges.

> *"So, I've pretty much just done what's gotten me through." (P5)*

The most common strategy mentioned by the women was that of setting breastfeeding goals. Five participants described setting such goals, with the intention of reassessing once they were reached. Words such as *"plan" (P3, P4), "pledge" (P10)* and *"milestones" (P8)* were used by the women to describe their breastfeeding goals.

> *"I set myself milestones...So I was like we're going to go to 6 months and see where we're at… alright let's go for a year and for a year I'm like you're still a baby." (P8)*

In some instances, the goal setting was a response to concerns about being able to breastfeed successfully, and in other instances it was used in response to a difficulty or challenge faced.

> *"Like ok it's really hurting now let's just try it again for another few days and reassess and, then try a few days and reassess and, if it doesn't work you know." (P5)*

Setting breastfeeding goals was demonstrated to be a successful strategy in assisting women to meet their breastfeeding targets as evidence by their continued breastfeeding.

Explicit goal setting combined with what appeared to be self-efficacy in accessing information and support, a self-sufficient attitude and a demonstrated perseverance and resilience were evident across the cohort of participants. It was not a lack of challenges, but rather an ability and willingness to cope with them using these attitudes and strategies which were the tools enabling the women of this cohort to successfully maintain breastfeeding.

4.3.3 A Dissociation Between Actual and Perceived Challenges - … I Think I Might Have Struggled If…

An interesting phenomenon was identified during data analysis regarding the women's perceptions of their experience, the challenges that they were faced with, and their own effort and role in overcoming these challenges. It was noted that participants often ascribed their success at

maintaining breastfeeding to luck or circumstance. When asked about challenges or support required they would often pose challenges as hypothetical or described support that other people might require, should they be in a similar circumstance.

Hypothetical Challenges. Breastfeeding and other challenges were often discussed by the women as hypothetical or theoretical. When challenges were identified, their impact was often downplayed. When asked to describe challenges or barriers that they had faced in relation to their breastfeeding, the response was often prefaced with phrases such as *"I think if … it would have been different" (P3, P4, P5)*, or *"I think if… it might have been difficult" (P5, P6, P9)*. This lack of recognition of one's own challenges was recurring throughout the interviews.

> *"I know that if I had problems it'd probably be a different story." (P3)*

> "*I think I would have definitely struggled a bit more if I'd had issues, because obviously when they are away you don't have that second person to help…" (P2)*

When asked for recommendations for supports that would be helpful, the women generally replied with suggestions for others, with an inference that they themselves would not or had not needed them.

> "*But I don't know, I guess because there's a lot of international [people] like [on] 457s [visas] that are here and stuff, I don't know how they'd go if they had a baby here and their husband was FIFO." (P4)*

> *"I would anticipate that first time mums or even second time mums who have had problems breastfeeding, I think they would find that really challenging." (P5)*

> *"But I can imagine some women would and I don't know if there's anything out there actually." (P9)*

Data demonstrated that women did in fact experience challenges or barriers to their breastfeeding, but they did not recognise them as such, or did not present them as significantly

impacting on their experience. An example of this was a participant describing herself as lucky because *"I didn't have any major issues or anything like that" (P2)*, but who then described having her baby experience reflux or colic symptoms, followed by a tongue tie diagnosis and a surgical procedure to revise the tongue tie.

> *"So, no actual issues with supply or latch or anything like that. We did have tongue-tie issues which didn't really cause breastfeeding issues but caused lots of windy sort of refluxy type issues. So, I was lucky that I was still able to feed during that and never got the whole cracked nipples and all that sort of stuff, I was quite lucky. But it did take a while to get all the actual snipping and lasering and, all that sort of stuff sorted. Yeah so, he was comfortable more than anything really. So that took about nine, ten weeks by the time that was all sort of over. And then after that I haven't really looked back, I haven't had any issues, never had mastitis, never had… Yeah nothing at all really so I was very, very lucky." (P2)*

In this instance it can be seen that the participant perceived these not to be breastfeeding issues, however it also demonstrates a negation of the difficulties faced and her own role in successfully maintaining breastfeeding. It became apparent in the data that in several instances, the women interviewed did not recognise the significance of challenges that they had experienced and overcome, nor their own role in successfully maintaining breastfeeding.

Getting Lucky. Aligned with this lack of awareness of challenges faced was a significant theme of women describing themselves or their circumstances as "lucky" and attributing their success in maintaining breastfeeding to this luck or happenstance rather than their own efforts. Throughout the interviews, the word "lucky" was mentioned 35 times, and 28 of these mentions were in direct response to being asked to describe why they had successfully maintained breastfeeding. Nine out of ten participants expressed the sentiment that their breastfeeding journey had been successful due to factors outside of their control. Other contexts in which luck was discussed were indirectly related to successful breastfeeding, such as helpful rosters, or related to

successfully facing challenges of the FIFO lifestyle such as having kids who are older and less reliant on the breastfeeding mother, and having family support when the children and mother fell ill whilst the partner was away working.

Overall, this devaluing of their own actions in successfully maintaining breastfeeding and meeting challenges associated with the FIFO lifestyle was a common occurrence amongst participants. This aligns with and informs other characteristics displayed such as resilience, perseverance, and self-sufficiency to present a determined, resourceful, and resilient philosophy and approach to life. The women were demonstrably capable of meeting the challenges of maintaining breastfeeding whilst living a FIFO lifestyle, due to a variety of inherent characteristics and attitudes that they were able to employ to achieve their goal. Nonetheless actual or potential difficulties directly related to a FIFO lifestyle were highlighted, often unintentionally, through the women's descriptions of their "luck" to be successful in breastfeeding, or in conveying challenges that they or others may face, even if they did not perceive themselves to experience these challenges.

4.4 Theme 3 – FIFO Impacts and Recommendations

4.4.1 The FIFO Experience - Oh Yeah, That's Exactly Our Experience

When interviewed about their breastfeeding experience, the women often described experiences or strategies for coping that were directly or indirectly related to the FIFO lifestyle. Common experiences included being on their own for large amounts of the time, the burden of being the sole care provider whilst their partner is away, missing the practical and emotional support of having a partner present, and difficulties of both a personal and logistical nature when the partner was absent. These explicitly identified issues have been collated as a separate theme presented in the following section and include challenges and barriers as well as enablers.

No Time Off When Partner Away. Many women stated that they were unable to have any "time off" whilst their partner was working away, and that being the sole care provider whilst their partner was away took a physical and emotional toll. Participants lived in a cyclical pattern of being

alone due to the FIFO roster and, expressed relief and anticipation of assistance when their partner returned to the household.

"It gives me a break after having 8 days of chaos with very little help." (P3)

"… You can't wait for your husband to come home to have a break." (P4)

It can be seen that given the nature of breastfeeding and the effort required by the mother to continue to do so successfully, being the sole provider for significant periods of time can present a barrier or challenge to maintaining successful breastfeeding.

Missing Partner Support. The women also expressed that they missed having the practical and emotional support of a second person at home when their partner was away. When their partners were home, women felt emotionally supported and described not feeling alone in parenting duties. Both multiparous and primiparous women expressed the value of having their partner home to support them in decision making around the baby.

"Yeah, 'cause particularly when you're sleep deprived, you're breastfeeding, you're full of hormones, you're tired and you're like well I don't know if she's still hungry and, sometimes you just need another rational human being to be like look yeah, we fed her an hour ago I'm sure that maybe she just wants to be held or… It's the second opinion thing that sometimes just helps so much." (P3)

"Yeah, just not having, not having anybody there to go well… what should we do?" (P10)

As well as support with decision making, the women expressed that the practical support was welcome when their partner was home.

"I mean not that I can really get a break from XX [baby's name] anyway, but it's just the little things like XX [partner's name] bathing him is half an hour for me to you know, yeah, just do nothing. I can cook dinner and not have to be keeping an eye on him." (P4)

"… Just those little things that you'd ask your husband to do and they get stacked up and you can't do it." (P9)

Challenges and effort associated with being the sole provider whilst the partner worked away was a recurring theme amongst the women. It was expressed in a wider context than breastfeeding alone to encompass parenting and maintaining a household and represents a distinct phenomenon occurring in this population.

Illness and Emergencies. Unexpected events were identified as having caused issues for FIFO families and were demonstrated by instances such as illness within the family, or family emergencies. Women at home were presented with difficulties if faced with illness or family emergencies while their partner was away. They often described dealing with illness within the family on their own, which was difficult, but they reported being able to manage these events.

"There's been a few sick days pulled from school where it's just, it's been too hard... Again, I've just done whatever I could. You know if it's been cereal for dinner, it's been cereal for dinner." (P5)

Some women described experiencing family emergencies whilst their partner was away, and the difficulties this created for both themselves and their family at home, as well as the partner who was on site and separated from the family.

"XX [baby's name] was admitted to XX [tertiary paediatric hospital] when he was 5 months with suspected meningococcal and that was an awful experience. It happened on a weekend. Where my husband works they don't fly out on the weekend so I literally had to call him after I called an ambulance… he was basically stuck on site until Monday morning. So, for him that was terrifying. Terrifying because he physically couldn't be there to support XX [baby], to support me. He was worried about the girls, you know they kind of just got shipped off to the grandparents. Yeah, it was a very you know hopeless feeling really." (P5)

> *"… Both my kids … got influenza A, the real bad one. Honestly, they were so, so sick and I'd just had XX [newborn]. So, the doctor said I had to be quarantined… in my own house. So, I had to go to the bedroom, I had to live in the bedroom until they were ok. So, we had to call, XX [partner] couldn't handle it either, could you imagine asking your husband to help (a) help me and (b) look after two kids with influenza A. So, we had to call his parents to come. Luckily, they were only, I think they were 8 hours away, they were down at Esperance or something. Yeah, but if was an emergency and I had to go to A&E or something I would call my neighbours." (P9)*

These experiences demonstrated the challenges that were faced by these families in particular circumstances due to the nature of their FIFO lifestyle. Despite this, the women described support networks that they had beyond the worker that they were able to call on for assistance (such as grandparents and neighbours).

Adjusting to a Two-Parent Household. Another unique experience described by these women was how the household or partner adapted to the partner's return from work. Women expressed that either their partner adapted to the routine of the family, which was reported as helpful for the mother, or that the family routine was disrupted or different when the partner was home. Although women expressed relief for when partners returned home to have a second adult around for support and help, this also caused issues. The adaptation from a one-parent to a two-parent household is a cyclical occurrence that is unique to the FIFO lifestyle, and some participants described challenges associated with the transition. Families in which the partner fitted into the family routine reported a smoother transition and less difficulties around this.

> *"… obviously when he's home to just be the way it is instead of having to change anything 'cause he's home or anything like that… So, I think you know just going with the status quo, I think has been quite helpful." (P5)*

One woman described how the family has moved from changing routine when the partner returns home, to the partner fitting into their usual routine and how this had been a significant help in managing the FIFO lifestyle.

> *"Yeah, definitely hard and we didn't know what was meant to work, and you know he'd come home and ruin all the routines that I'd set up and yeah it was difficult emotionally… for both of us really. It took a good few years to learn how to live the FIFO life." (P9)*

This highlights the challenge associated with the transition, and how the family needs to learn how to adapt – it is not a given. Another participant stated, *"Yeah we change to suit him [partner]"* (P8) but identified challenges associated with this.

> *"But as soon as XX [partner's name] comes home and he has someone over I just find it so hard to get on top of that as well as everything else…" (P8)*

One other woman reported that their routine changed when the partner returned home, however importantly this participant had the longest 'swing' cycle (four weeks on, four weeks off), and was primiparous.

> *"Yeah it, yeah it [home routine] obviously does change. When he's away we tend to sleep downstairs because it's just a bit more convenient… When he's home we sleep upstairs in the family queen size bed and it just is, a little bit more support in terms of if I need to, you know, quickly kind of do something..." (P6)*

Her contentment with the changing routine may have more to do with her attitude and expectations around when her partner was home and when he was not, and this may be the most important element for success in that instance. The tone of the conversation when discussing the changing routine was that she expected her routines and actions would change whilst he was home, and that this was not an issue. This would align with the previous theme of flexibility and adaptiveness, in that

attitude, and not specific responses, were the reason for successfully overcoming challenges. It is clear that the participant quoted above (P8) did not feel similarly about the transitioning routine.

Most women reported that the partner adapted to the routine of the family, indicating that this was the preferred method of transitioning for these families. The inevitability and regularity of such a large change in the household structure can be seen to have a significant effect on the women and the families and has been identified by the women interviewed as an important element of the FIFO lifestyle.

FIFO as an Enabler. Contrary to researcher expectations on entering this project, the majority of women explicitly indicated that the FIFO lifestyle was an enabler to their overall goal for family life. The women rarely directly linked this with supporting breastfeeding, however it became apparent that for them this was intertwined, similar to practical and emotional support being inextricably linked together. The main reasons presented for this included the separation of work and home time (6 participants), and residential work involving longer hours and less family time (5 participants).

> *"Oh, when XX [partner's name] was Perth based, yeah I don't know if we could have survived as a family… But now when he comes home for two whole weeks he's completely 100 percent dad and husband." (P10)*

> *"You know, so he's off to a school excursion in half an hour, so he's the daddy volunteer. So, you know, he gets to do things like that, he wouldn't have had the opportunity to do that if he was working here." (P5)*

Two participants specifically mentioned that having a higher income was an enabler, with one woman identifying that this allowed her to be at home longer without returning to work, and another indicated that this was a major factor in their decision to begin FIFO due to unexpected family medical expenses. These factors, often combined, were identified as promoting and enabling the desired lifestyle of the family which included quality family time with the partner when they are

home, as well as continuing breastfeeding, although this was often inferred from the circumstance created rather than the woman directly identifying that FIFO was a breastfeeding enabler. Despite this, three women identified that being on their own was an enabler to their breastfeeding. Two participants mentioned that it allowed them to focus exclusively on themselves and their breastfeeding, whilst the third identified that being at home and not working allowed her to be less stressed which supported her breastfeeding.

> *"But in regards to the FIFO, the breastfeeding has been quite helpful actually because, well the FIFO's been quite helpful because my partner's away during the week... I had more time for her, put her first rather than thinking about my role as a partner." (P7)*

> *"I would say if we were talking about breastfeeding, definitely helped it… We're all less stressed yeah." (P9)*

FIFO has been shown to be an enabler to the family lifestyle and breastfeeding goals of this cohort. It has been shown to do this by enabling each parent the opportunity and time to focus on supporting the needs of each family member, such as the partner not having to work and having the time to focus on breastfeeding, or the worker having more dedicated family time at home. Although the women identified challenges associated with the FIFO lifestyle, they often also identified aspects of the FIFO lifestyle that were supportive of their breastfeeding either directly or indirectly.

FIFO Not Forever. Despite the many identified benefits associated with the FIFO lifestyle, six out of the ten participants identified that FIFO was not the long-term plan for their family. Reasons for undertaking a FIFO lifestyle were generally related to the benefits mentioned such as a better life balance, however the women identified that the lifestyle did take a toll and was utilised as a means to an end for their family. One woman intimated that they would prefer to not be doing FIFO but were unable to access work in a residential capacity.

> *"… my husband has tried to work locally but his industry, that's where the work is, so…" (P10)*

The rest of the women identified that FIFO was a choice that they had knowingly undertaken to provide the benefits that they had identified. In this way, FIFO was identified as a tool to achieve the lifestyle that they wanted to achieve for their family.

4.4.2 Recommendations - … It'd be Nice to Have …

Throughout the interviews, women were asked explicitly if they had any recommendations or suggestions for appropriate supports for FIFO families to breastfeed. The suggestions provided aligned to two broad recommendations: practical support, and connection with other FIFO families.

Recommendations for practical support centred around breastfeeding specific resources, as well as general support for the mother at home whilst the partner is away. Two participants recommended a lactation consultant would be beneficial, whilst one participant identified a breastfeeding mentor would be supportive for those who did not have family to turn to.

> *"Lactation consultants can be I think hard to get into, especially if you aren't at say XX [tertiary maternity hospital] or anything like that they can be pricey or difficult to access and all that stuff. So that probably might be a bit of a barrier for some people." (P2)*

> *"Maybe a mentor. Yeah, so even like a non-professional mentor. So, like I said I had my mum who was obviously very supportive but if you don't have that and you want to, if you just had somebody you know on messenger that you could just you know contact or whatever." (P10)*

Suggestions for practical support were not surprising, given the themes that emerged from the data around the challenges of being at home alone while the partner is on 'swing'.

> *"There could be an opportunity for some sort of support while your partner is away… Someone coming in or yeah, someone you can just call to help." (P9)*

> *"Maybe like a nanny program… a second person there that I can just kind of have a shower or you know just do my hair or just take to the park so I can spruce up the house." (P8)*

The other aspect of recommendations from the participants was for connection with other FIFO families. This was interesting, given that the women acknowledged not accessing this type of support themselves, however makes more sense in the context of intentionally curated connections.

> "*There's a lot of FIFO communities and stuff on Facebook and I don't know if it's, I don't know if like new mum FIFO groups." (P4)*

> *"That was the only thing that I wished I could have had was other people in the same boat as me that I could talk to or meet up with." (P7)*

Participants seemed to want to connect with other families in similar circumstances, that is families with new babies or breastfeeding families, and not just other families who happen to be employed in a FIFO capacity.

4.5 Conclusion

In this qualitative study, interviews were conducted with ten women and the data analysed by thematic analysis. This resulted in three distinct themes, "Breastfeeding just like everyone else", "A unique philosophy", and "FIFO impacts and recommendations". Through exploration of each theme and its linked subthemes, the reader has been presented with the findings of this study, which indicate that women identified both similar experiences to the general breastfeeding population, as well as some distinctly unique ones.

With regards to breastfeeding experiences specifically, each participant identified their antenatal intention to breastfeed, as well as common concerns such as their ability to be successful in their breastfeeding attempt. When asked to identify how FIFO had impacted their breastfeeding, most women had difficulty identifying any relationship between the two, as FIFO was their norm. On further exploration, however, participants described both positive impacts such as the FIFO employment allowing the mother to stay at home longer with the baby and dedicated family time when the worker is off 'swing', as well as negative impacts such as the difficulty in being the sole

parent whilst the FIFO worker was away. The unique philosophy of these women was a recurring theme throughout the data, demonstrating what appeared to be characteristics of perseverance, resilience, and self-efficacy of these women. This, combined with the enablers and supports identified by the participants, has allowed them to successfully maintain breastfeeding. The next chapter, Chapter Five, will provide a discussion of these findings in the context of relevant literature, as well as describe the study limitations, their mitigation as well as implications of findings for practice, and recommendations generated by this research.

Chapter 5 - Discussion

The purpose of this study was to identify and explore the experiences of women who were breastfeeding whilst their partner worked a FIFO roster. Beyond the objective of describing these experiences from the perspectives of the women living them, the two further objectives of this study were to identify the enablers and barriers with regard to the continuation of breastfeeding, and to describe current and potential support acceptable to the participants to aid continued breastfeeding. To this end, findings from the interview data were collated and three main themes emerged, which were presented in the previous chapter: *Breastfeeding just like everyone else, A unique philosophy,* and *FIFO impacts and recommendations*.

A dearth of information on breastfeeding within the FIFO context informed the research problem for this study, with a view to providing recommendations on supporting breastfeeding in this group. As was identified in Chapter 4, the women did not readily separate the FIFO employment arrangements from any other aspect of their life, and accordingly, they did not view their breastfeeding as any more affected by their FIFO lifestyle than anything else. The issues and strategies related to breastfeeding and FIFO were by nature interwoven, and as such are largely discussed together. In this chapter, the findings are summarised and evidence from the literature embedded within the discussion to provide an overview of current knowledge as it relates to the experiences described in this study, and thereby positions the findings of the study within the field of current literature. The synthesis of both the findings and the literature has guided the development of recommendations that are likely to be beneficial to supporting breastfeeding FIFO families, and these are presented in each section. The implications for clinical practice are then discussed and the recommendations are aligned with current strategies and directives in the area of supporting breastfeeding, namely the ANBS (COAG, 2019), and the WA Sustainable Health Review (Sustainable Health Review, 2019). Following this, limitations of the study are discussed and recommendations for further research are presented.

5.1 The Experiences of Breastfeeding Women with FIFO Partners

As the initial inquiry into the subject of breastfeeding and FIFO, a natural first objective for this exploratory, descriptive study was to identify and explore the experiences of the women who are breastfeeding in FIFO families. It can be seen from the findings that the women described breastfeeding experiences that were very similar to the general population such as their antenatal intention to breastfeed, sources of practical and emotional support, and common concerns and challenges associated with breastfeeding. One notable finding, however, was that women commonly attributed their success at continued breastfeeding to luck, or because they did not experience any breastfeeding issues. In reviewing the experiences of participants (such as, tongue tie with surgical revision (P2), reflux or colicky symptoms (P2, P4), painful breastfeeding (P5), mastitis (P9), and the inability to breastfeed from one breast (P9) it became abundantly apparent that this was not actually the case. Rather than not experiencing breastfeeding issues, the women simply did not perceive them as such. This is an important finding in the context of providing support for breastfeeding families and will be discussed in more detail in the following sections.

For these women, FIFO was their norm and therefore was not considered as separate to the rest of their lives. The experiences that they described related to FIFO, such as the increased burden of being the sole carer for the house and children whilst their partner was away and transitioning from a one-parent to a two-parent household, align with findings from the current literature (Gardner et al., 2018; Misan & Rudnik, 2015; Torkington et al., 2011). Generally, the women faced some challenges with FIFO, but overall, they felt that the lifestyle was good for their family and worth the effort. This reflects previous findings in the area, in which the advantages of FIFO such as remuneration (Gardner et al., 2018; Henry et al., 2013; Misan & Rudnik, 2015) and quality family time (Bradbury, 2011; Henry et al., 2013; Lester et al., 2015) are well documented. For the women in this study, these positive aspects were not only worth the effort, but they were the rationale for choosing the FIFO lifestyle.

"But we feel that the work/ life balance is better at the moment with him doing FIFO than … the hours he was doing you know, full time working in the city. You know, he'd be working six in the morning till six or seven at night. Having to work from home as well." (P1)

When prompted, participants were generally able to identify some links between their FIFO lifestyle and how it has impacted upon their breastfeeding, but in general this was something that they had difficulty with, and it could be seen from their facial expressions and responses during the interviews that this was not something they naturally considered separately. Contrary to what was expected prior to conducting the study, women who were able to make a link between FIFO and breastfeeding generally described it as an enabler. For some women, the FIFO remuneration allowed them to stay off employed work for longer, which they felt contributed to their breastfeeding continuation, whilst for others it allowed time for them to focus solely on themselves and their baby, without the role of partner also being required.

"I think that with my first if my husband had been home and I was going through all that pain I think I probably would have stopped earlier... being on my own I just pushed through that because I felt like I wanted to, but I could have been talked out of it." (P10)

The findings of this study are consistent with current literature on FIFO families, and on breastfeeding, respectively. It is possible that the positive associations between breastfeeding and FIFO are the result of the sample, which comprised currently breastfeeding mothers and therefore not representative of those who had ceased or chosen not to breastfeed. Additionally, it must be noted that despite an attempt at sampling for new-to-FIFO participants, the shortest duration of FIFO among families in this study was two years. Bradbury (2011, p. 39) identified that "veteran families may utilise more adaptive resources such as increasing inter-family communication, involving extended family, seeking improved FIFO working conditions or alternative employment," enabling these families to have a more positive and productive FIFO experience. Hence the duration of the FIFO lifestyle may account for the positive associations between breastfeeding and the FIFO

employment arrangement that emerged. This will be discussed further in the limitations section of this chapter.

5.2 Enablers, Barriers, and Supports for Breastfeeding Continuation in FIFO Families

The following section will address the final two objectives of the study. The difficulty that the women had in explicitly identifying enablers, barriers, and supports for their breastfeeding meant that some of these were embedded in narratives from participants and were identified by the researcher. A pragmatic approach has therefore guided the structure of this section, which will address the aim of the study by focussing on the potentially modifiable factors affecting breastfeeding as framed by the seminal work of Meedya et al. (2010) on factors that positively influence breastfeeding duration: breastfeeding intention, self-efficacy, and social support. For the ease of the reader, strategies that are likely to be beneficial in supporting breastfeeding in this group have been presented following the relevant topic.

5.2.1 Intention and Motivation to Breastfeed

Each participant in this study identified that they had intended to breastfeed, and that this decision had been made antenatally. This finding aligns with other studies which reflect that breastfeeding intention is usually made before or during the pregnancy (Datta et al., 2012) and is a strong predictor of both initiation and duration of breastfeeding (Meedya et al., 2010). For some women this was a definite decision, whilst for others it was qualified with “if I can”. In either scenario, the intention to breastfeed was demonstrated. As will be discussed in the limitations section later in this chapter, this was an expected finding given that the participants of the study were currently breastfeeding. However, it is also acknowledged that families may choose to utilise bottle-feeding as a method of allowing the father to bond with the baby (AIHW, 2010; COAG, 2019). It was postulated during the conception of this study that this may be a strategy used by FIFO families to help mitigate the frequent absences of the worker from the child, particularly as partners of childbearing women have been identified as influential in infant feeding decisions (Meedya et al., 2010; Rempel & Rempel, 2011; Tohotoa et al., 2009). Partner influence on feeding decision was

evident in the findings of the current study, where each participant identified that their partner was either actively involved in, or supportive of, the decision to breastfeed. However, mixed feeding to facilitate bonding for the non-breastfeeding parent was not found to be the case for most participants in this study. Of the ten women interviewed, only two described that they had attempted bottle-feeding to allow bonding. One was successful, and the family continued with mixed feeding (bottle and breastfeeding), but the other family was not successful in that the baby did not accept the bottle and they therefore continued to exclusively breastfeed. When mixed feeding did occur, it was generally done to allow the mother time away from the baby whilst the FIFO worker was home. Utilising activities such as bath time or changing nappies for fathers to bond with their breastfed baby has been identified in literature surrounding the role of fathers in breastfeeding (deMontigny et al., 2018; Rempel & Rempel, 2011), and this aligned with findings in this study in which several participants identified that the worker had other bonding methods such as bath time.

The motivation for choosing to breastfeed in this group was also aligned to the current literature, with most women identifying that “breast is best”. It is widely acknowledged that breastfeeding is the most nutritious option for infant feeding (COAG, 2019; WHO, 2020), as well as having health-protective effects for both mother and baby (COAG, 2019). Some women in this study identified other motivations for breastfeeding, including the convenience of breastfeeding as opposed to bottle feeding. This was mainly from multiparous women or as a result of hindsight (i.e., primiparous women who did not know or expect antenatally that it would be the most convenient option but found it to be so).

5.2.2 Strategies to Increase Intention and Motivation to Breastfeed in FIFO Families

According to the findings of this study, there are several benefits to breastfeeding whilst living a FIFO lifestyle and highlighting the convenience and the health benefits to the mother and baby may be an effective strategy for increasing breastfeeding intention and motivation.

Convenience. Although this study found a 100% rate of positive intention to breastfeed, it can reasonably be assumed that not all women with a FIFO partner will have made this decision or

have an inherently high motivation to continue breastfeeding. Parenting whilst living a FIFO lifestyle requires the stay-at-home partner to assume all of the household and childcare responsibilities while their partner is on 'swing' (Gardner et al., 2018; Torkington et al., 2011), and it is therefore likely that highlighting the convenience of breastfeeding antenatally is a potentially beneficial strategy to increase the intention to breastfeed amongst this population. The health benefits of breastfeeding for the baby are likely already known to some extent by the women and partners. It has also been suggested that promoting the benefits of breastfeeding can be perceived as pressuring to women (Keevash et al., 2018). Therefore, the focus of education or information should not be on these benefits, although they should be included. Further, interventions aimed at increasing self-efficacy, rather than simply enhancing knowledge, are more effective in supporting breastfeeding (Galipeau et al., 2018; Meedya et al., 2010; Smith et al., 2018). According to Galipeau et al. (2018), interventions aimed at increasing breastfeeding self-efficacy are built on the principles of BSE theory (performance accomplishments, vicarious experiences, verbal persuasion, physiological reactions) as described by Dennis (1999). An example of this was developed by Hauck et al. (2007), which assessed whether a breastfeeding journal would increase breastfeeding duration and self-efficacy. This intervention aimed to increase BSE through the provision of evidence-based breastfeeding information and exercises designed to prepare mothers to work through potential or actual breastfeeding difficulties by planning for their response to these situations before they arose, allowing for an increased sense of preparation and self-efficacy to overcome such challenges.

Health Benefits of Breastfeeding. Emerging literature on adverse health effects of FIFO on the stay-at-home partner (Peetz et al., 2012; Wilson et al., 2020) suggest that highlighting the health benefits of breastfeeding for the mother in breastfeeding support or interventions may also be a helpful strategy. Encouraging partners of the breastfeeding mother to attend this education is recommended, as breastfeeding interventions that include partners have been proven to positively affect breastfeeding initiation, duration, and frequency (Abbass-Dick et al., 2019). Having the partner attend with the breastfeeding mother will also mean that they are being exposed to information on

the benefits of breastfeeding for the baby, mother, and family. This may add to the beneficial effects of the strategy given the significant role of the partner in the decision to breastfeed (Meedya et al., 2010; Rempel & Rempel, 2011; Tohotoa et al., 2009). Incidentally, any discussion of health and wellbeing may be of benefit to FIFO workers, regardless of the setting, given the health risk factors that are commonly found in this population, such as overweight and obesity (Clifford, 2009). It will also ensure that there is a greater awareness that FIFO affects both partners, and that families or couples should consider this when planning or adapting to their young child.

The intention to breastfeed is a significant factor in successful breastfeeding. Including tailored information on the benefits of breastfeeding for the mother, such as convenience and health protective effects, is likely to be more relevant to this population and should be included in antenatal breastfeeding information to increase intention and motivation to breastfeed.

5.2.3 Self-Efficacy

Self-efficacy has been defined as "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1997, p. 2) and is positively linked to behaviour change and wellbeing. BSE therefore relates to a woman's perception of her ability to breastfeed her baby (Dennis, 1999) and has been demonstrably associated with longer breastfeeding duration (Forster et al., 2006; Gallipeau, 2017; Hauck et al., 2007). A major theme that was highlighted repeatedly throughout the findings of this study was the pervasive confidence that these women held in their own ability. This was not necessarily related to their breastfeeding self-efficacy specifically, as evidenced by the concerns raised about their ability to breastfeed, however their broader confidence in their own ability to manage their circumstances was admirable and humbling and seems to have had a protective effect on their breastfeeding. Many of the themes that emerged from the data centred around instances in which the women identified that they were capable and confident. These included, conducting their own research into available resources and supports, selective accessing of supports that were beneficial, and a willingness to abandon supports or resources with which they had a previous negative experience, or felt were a negative influence

on what they were trying to achieve. An example of this was choosing not to attend their local mothers' group when they felt it had a negative effect on their confidence. Women harnessed this confidence in their own ability to support their breastfeeding, in the same way that it was utilised to support managing their parenting, the FIFO lifestyle, employment commitments and any other circumstance that presented. The women consistently displayed their adaptability, perseverance and a deeply held confidence and commitment to the goals for themselves and their family. This may align with findings by Brown (2013) who found that women with extroverted and conscientious personality traits as well as emotional stability have been reported as more likely to initiate and continue breastfeeding. Based on these findings, Brown further postulated that contrasting personality traits such as anxiety or introversion may lead to women being less likely to seek supports or overcome challenges such as negative views of others towards breastfeeding. Although a strengths-based approach is strongly recommended as will be discussed below, it should be also noted that the 'no-plan-B' approach to breastfeeding as has been displayed by some participants in this study, may denote an unwillingness or inability to be flexible or adapt in the face of significant challenges. In this way, there may be instances in which this attitude becomes a risk factor for the mother, rather than an enabler. There is evidence to suggest that negative breastfeeding experiences are linked with maternal depressive symptoms (Watkins et al., 2011), so it is important for support providers to be aware of the mindset and actual breastfeeding experiences of these women.

5.2.4 Strategies to Increase Breastfeeding Self-Efficacy in FIFO Families

Given the findings of this study, a strengths-based approach is suggested to celebrate and enhance self-efficacy in this group. A strengths-based approach has been defined as "highlighting 'what is strong' rather than simply 'what is wrong'" (Social Care Institute for Excellence [SCIE], 2018) and provides a framework for focusing interventions and support. The National Institute for Health and Care Excellence (NICE) identify that a strengths-based approach can include personal strengths or "assets", community strengths and assets, and supporting people to shape their communities

(NICE, 2019). In supporting breastfeeding in FIFO families, it is likely that harnessing personal strengths as well as community assets will be most relevant.

A strengths-based approach in the personal domain should be aimed at allowing the women to increase their breastfeeding self-efficacy, utilising the skills that they already have. For example, the women expressed an ability and a willingness to research topics on which they required further information, and so providing encouragement and a resource (such as a help directory) that would assist with this is a potential strategy for increasing breastfeeding self-efficacy amongst this population. Given the practical pressures on FIFO families, a directory or single source of breastfeeding information, which includes relevant and easily accessible resources for specific FIFO and breastfeeding issues, could streamline this process of accessing resources and be positively received by this population. Acknowledgement and celebration of the skills and motivation of the woman and her family (such as self-efficacy and willingness to engage in seeking own resources), where present, by healthcare professionals and other support providers is likely to be well received and assist with building rapport with clients in this group, as well as allowing for person-centred and productive assessment and support. Person-centred care is associated with safe care and positive experiences (Australian Commission on Safety and Quality Health Care [ACSQHC], 2011), and is a foundational element in the ACSQHC's (2019) Partnering with Consumers Standard. Inclusion of discussion points that allow women to express the issues that they are experiencing should assist with building rapport with support providers. Discussion that identifies what resources they have already accessed or strategies that they have tried already to alleviate the issue should be respectful of the abilities and self-efficacy of this group and are likely to be a successful approach to delivering support.

5.2.5 Social Support

For the purposes of this discussion, the term social support is as defined by Meedya et al. (2010), and relates to professional, family, and peer support, experienced when a woman receives "care, concern, respect, understanding, advice, encouragement and practical help" (p. 136).

Having access to support is important for breastfeeding mothers for a variety of reasons. Practical and emotional support are positively linked with breastfeeding duration and are often largely provided by the partner (Datta et al., 2012; Maycock, 2013; Meedya et al., 2010; Rempel & Rempel, 2011). Help with food preparation, settling the baby, and other practical support such as getting drinks and answering phones, are only possible with a second person present, such as is usually the case with a cohabitating partner. As such, this was again something that the researcher perceived would be a possible barrier to breastfeeding in FIFO families, as this would not be available for significant periods of time. However, despite the significance of partner support, women also found support for breastfeeding from other sources. Having a supportive family and friends or peers (beyond the partner) can positively influence a woman's decision to breastfeed or continue breastfeeding (Gianni et al., 2019; Hauck & Irurita, 2003; Meedya et al., 2010). Contrary to the researcher's expectations prior to the study, supports were not lacking in this population.

In the current study, each participant was able to clearly identify sources of support for themselves and their family. As this study was focused on women who were currently breastfeeding this is again perhaps not surprising, although at the commencement of the study it was anticipated that partners of FIFO workers may have more limited access to supports. While this was true in some contexts (mostly the hypothetical or experienced-by-others contexts that were presented in the findings chapter, which will be discussed in more detail below), it was certainly not true in all, as evidenced by the interview responses. Generally, this came from family, professional support (such as health professionals), friends or neighbours. This finding aligns with Gallegos' (2005) study, which identified family as the most common source of support, and others included childcare, peers (such as mothers' groups), neighbours, doctors, and cleaners. Gallegos' study did not focus on breastfeeding FIFO families, and the alignment of the findings from the current study with that of Gallegos suggests that the experiences of breastfeeding FIFO families is similar in this aspect to non-FIFO families. In addition, the women displayed confidence in their own ability to search out

assistance when needed. It seems a reasonable conclusion that the women were able to deal with the lack of partner support whilst breastfeeding, with adequate support from others.

Rather than the availability of supports, the issue (where it existed) more specifically lay with constraints in accessing those supports. These women may experience constraints specifically attributed to the FIFO lifestyle in accessing support. For example, a woman whose partner works a FIFO roster may have a local mothers' group available to her but may not be able to actually attend regularly due to family commitments or altered routine when their partner is home from 'swing'. In other instances, the women stated that they were able to access particular supports or resources but felt that they *should not*, rather than *could not*. This was often associated with the notion that in choosing the FIFO lifestyle, they had also chosen the sacrifices or limitations that were entailed, a finding that has been reported elsewhere in the FIFO literature (Gardner et al., 2018).

Regardless of how individual women and families are able to navigate their routine around a FIFO roster, understanding the unique context and challenges of this for health professionals can only be beneficial, and optimally, will assist to guide compassionate and productive understanding, assessment and recommendations for women who are breastfeeding whilst their partner is employed in a FIFO roster.

5.2.6 Strategies to Increase Support for Breastfeeding in FIFO Families

There are some immediately identifiable factors associated with support that are likely to impact on breastfeeding FIFO families, such as the potential for lack of practical support around the house when the partner is on 'swing', and emotional support from the partner when they are away. Despite these intuitively linked factors affecting support, the specifics and implications of these are likely to be as individual as the families are. Therefore, although a good working knowledge of these is likely to be beneficial for those involved in providing breastfeeding support to these women, this should not lead to assumptions about these families, but rather be a 'flag' for the provider. Knowledge of the potential contexts or issues that a FIFO family may face should guide individual assessment and support, thus allowing the healthcare provider to build rapport and gain an accurate

understanding of specific areas that may be impacted and how they may be best addressed or negated.

Any Support is Good Support. An important finding to be highlighted is that support was perceived as helpful regardless of the form it took. The women in the present study did not differentiate between the types of support, and neither did they present a preference for a particular type. The implication of this is that support that is lacking in one area may be mitigated by the provision of another, more accessible form of support. For example, practical assistance that is usually rendered by the partner when home may not be available whilst they are on 'swing', but a friend or neighbour may be able to visit and provide some practical or even just emotional support, and this may be beneficial in supporting breastfeeding mothers in these circumstances. It has been noted that mothers receiving support from sources other than their partners are significantly more likely to breastfeed (Blyth et al., 2004). Given that the 'swapping out' of one form of support for another is a potentially viable strategy, this may then allow for unmodifiable factors to be mitigated by other approaches. For example, having a mother who breastfed or who is supportive of breastfeeding is a known supportive factor in successful breastfeeding (Negin et al., 2016), however it is unmodifiable. A culture of peer support for breastfeeding is a potential strategy. Additionally, normalisation of breastfeeding in a wider context should be recommended. The women in this study echoed concerns and challenges that are already identified in current literature, such as anxiety about others' perceptions when breastfeeding in public (Brouwer et al., 2012; Leeming et al., 2012), or their ability to successfully breastfeed at all (Blyth et al., 2008; Meedya et al., 2010). This similar finding in the present study joins the call from other literature for a more normalised breastfeeding culture in Australia (COAG, 2019; Smith et al., 2018), which is likely to improve breastfeeding outcomes for this group as well as wider society and aligns with the current Australian Government's Breastfeeding Strategy's (COAG, 2019) stated aims and outcomes.

Beyond providing alternative forms of support, partner support specifically is a strong predictor of breastfeeding success. This relates not just to practical support but also emotional and is

potentially modifiable. Inclusion of this topic in information for FIFO families, as well as any resources or training that is developed on this topic for employers and health professionals, may be a good strategy to address this.

Recommendations from the Women, For Women. One of the objectives of the study was to describe, from the women's perspectives, current and potential means of support acceptable to participants to promote breastfeeding continuation. To this end, a theme emerged of specific recommendations provided directly from the women of supports that they currently have and find useful, or that do not exist, and which they feel would be beneficial. These recommendations have been presented fully in Chapter 4. Including the women as stakeholders in strategies that are developed to support them is crucial and is a recognised approach sanctioned by the Australian National Safety and Quality Health Services Standards (ACSQHC, 2021). The recommendations from the women focus on practical support such as someone to visit in the home and assist with other children or provide emotional support; breastfeeding support such as access to a lactation consultant or breastfeeding mentor; and a desire to connect with other FIFO families in a similar position to theirs. These recommendations are likely to be feasible and achievable and will be discussed in more detail in the implications for clinical practice section to follow.

This section has presented the enablers, barriers, and supports likely to be beneficial for enhancing the continuation of breastfeeding in FIFO families. The following section will now build upon this to discuss the implications for clinical practice, aligning these strategies and recommendations with current directives and guidelines in place to support breastfeeding in Australia.

5.3 Implications for Clinical Practice

FIFO is an ongoing employment model with significant numbers in both WA and across the nation. This study has produced insights that allow a better understanding and ability to target support and resources to FIFO families, knowledge of which is likely to have a positive impact on

their breastfeeding experience and outcomes. Promoting increased breastfeeding aligns with state (Sustainable Health Review, 2019), national (COAG, 2019), and international strategies (WHO, 2014) for improved public health. Given the low rates of breastfeeding in Australia, and the ever-increasing rates of chronic diseases against which breastfeeding is potentially protective, promoting and supporting breastfeeding in all populations is a public health priority. Knowing the potential barriers that may affect breastfeeding in this group, as well as enablers and appropriate support strategies, will be beneficial for breastfeeding support providers in tailoring assessment and support for breastfeeding FIFO families. Increasing engagement with services is beneficial given that this population has demonstrated that they will cease to engage if the experience is perceived to be negative. A greater understanding of the FIFO lifestyle and the context for these families will allow support providers, FIFO employers, and FIFO families, to support and prepare for breastfeeding whilst living a FIFO lifestyle.

The following recommendations have been developed according to the issues and strategies discussed in this chapter. They are presented below, and their alignment with current breastfeeding strategies is demonstrated.

Recommendation 1: Development of Breastfeeding Resources Aimed at FIFO Families. A resource could be developed or adapted to provide current or prospective FIFO families with information and resources around breastfeeding, early parenting, and the FIFO lifestyle. This resource should include information on the benefits of breastfeeding for the baby, mother, and family, as well as resources to support and develop breastfeeding self-efficacy, such as activities to plan or prepare strategies for common breastfeeding and FIFO challenges. Aligning with the self-efficacy demonstrated throughout this study and acknowledging the unique context of parenting and breastfeeding in a FIFO family, this resource should be available online or as an app, to provide support that is accessible and available as required and is not restricted to the availability of services. Beyond the online aspect, a support or social group aligned with this resource would provide the opportunity for face-to-face interaction and intervention that is tailored specifically to this population. It is

acknowledged that the provision of breastfeeding information is helpful, however efforts that include a face-to-face option are more effective (Smith et al., 2018). This has the added benefit of simultaneously addressing the recommendations from the study participants for the ability to meet other families in similar positions to themselves. The development of a tailored resource for FIFO families, aligns with the ANBS's *individual enablers* priority, by providing "universal breastfeeding education, support and information services", specifically providing "education about the significance of breastfeeding for their babies and themselves" to the mother and her support network (COAG, 2019, p. 47).

In addition, this recommendation aligns with the WA Sustainable Health Review's strategy 3 *Great beginnings and a dignified end of life*, which acknowledges that "efforts during the first 1000 days of life provide the best opportunity to address risks related to chronic disease" (Sustainable Health Review, 2019, p. 69). This Health Review also prioritises setting systemic targets for the health of women and babies, such as breastfeeding (Sustainable Health Review, 2019).

Recommendation 2: Develop a Resource on FIFO Families and Breastfeeding for Support Providers. The importance of accessible and relevant information and support for any breastfeeding family cannot be overstated. For FIFO families, their unique circumstances and the lack of published literature in this area means that it is unlikely that healthcare or other breastfeeding support providers have much insight into the experiences of these families. As discussed, knowledge of their potential challenges and enablers or supports will help to prepare providers to tailor care and build rapport, to support continued breastfeeding in these families. A training module outlining current knowledge of the FIFO experience for families, acceptable support services, and specific challenges should be developed. Such a resource should adopt a strengths-based (SCIE, 2018) and person-centred (ACSQHC, 2011) approach as discussed earlier. Factors known to increase stress on FIFO families such as being new-to-FIFO (Beach et al., 2003; Watts, 2004), having young children (Clifford, 2009; Mayes, 2020), or feeling stressed about money (McPhedran & De Leo, 2014) could be collated with known offsetting factors such as duration of FIFO (Bradbury, 2011) or support networks of the

individual or family, to develop an assessment tool for support providers working with these families. This recommendation would align with the ANBS's action area 2.2 *Health professional's education and training*, (COAG, 2019, p. 41) and the WA Sustainable Health Review's strategy 1 *Commit and collaborate to address major public health issues,* specifically addressing the "key public health issue" of nutrition (Sustainable Health Review, 2019, p. 46).

Recommendation 3: Develop a Resource on FIFO Families and Breastfeeding for the FIFO Industry. In a similar vein to the resource for breastfeeding support providers, a resource to provide information and a greater understanding of the needs of breastfeeding FIFO families should be developed for those working in the FIFO industry, and particularly employers and managers involved with FIFO workers. Participants in this study acknowledged varying levels of support from their employers as well as concerns about family life whilst working FIFO such as inability to respond in an emergency, and this aligns with the findings of other studies into FIFO employment (Gardner et al., 2018; Henry et al., 2013; Torkington et al., 2011). Resources and training in this area should be provided with the aim to increase awareness and create a family-friendly culture, in response to the documented concerns and challenges faced by FIFO workers with young families. This recommendation aligns with the ANBS's action area 1.1 *Community education and awareness*, specifically the action to "support breastfeeding education in schools and communities" and particularly "in local communities where there are high proportions of new families and/or priority groups" (COAG, 2019, p. 32).

This section has outlined the implications for clinical practice in relation to supporting the continuation of breastfeeding in FIFO families. Recommendations have been provided according to the aim of this study, and these have been aligned with current local and national health directives. The last section of this chapter will discuss the limitations of this study, as well as recommendations for further research into the area.

5.4 Limitations and Recommendations for Future Research

The primary limitation of this study was the small sample size. A small sample size is appropriate for a qualitative study, and for the scope of candidacy requirements for a higher degree by research Master of Philosophy study. Further to this small size, the women recruited were all living in Perth, WA and therefore the voices of participants who live outside of the metropolitan area have not been represented in this study. Effort was made by the researcher to provide diversity and representation of eligible participants with purposive sampling – specifically by targeting multiparous as well as primiparous women, and new-to-FIFO families. Despite this, new-to-FIFO families were not able to be recruited. As this population has been identified as 'at increased risk' in a FIFO context, this is perhaps not surprising. It is recommended that further research be undertaken to explore the experiences of new to FIFO families who are juggling breastfeeding and early parenting, in order to provide best support. As discussed in Chapter 2, it has previously been acknowledged that new-to-FIFO literature is lacking (Arnold, 1995) and that a self-selection bias may be the reason for this (Cooke et al., 2019) in that those families who do not adapt to the lifestyle leave it and are therefore not represented in research into the area. This is both a limitation to the current study, and a recommendation for future research into the area, particularly given that there are likely to be young families who are breastfeeding whilst also being inexperienced in the FIFO lifestyle.

All participants in the study were successfully breastfeeding. This was again appropriate for the aim and objectives of the study and was designed to both limit recall bias and ensure that the researcher was able to explore this experience deeply with the participants. It is recommended that FIFO families who have ceased breastfeeding or did not attempt breastfeeding be further explored in future research. Capturing the experiences of those who are not breastfeeding is likely to give more insight into the broader determinants of breastfeeding in this context, and how to best assist this population in commencing their breastfeeding journey and promote breastfeeding continuation.

5.5 Conclusion

This study aimed to explore the experiences of women who were breastfeeding whilst their partner was employed in a FIFO capacity, with a view to producing insights and recommendations to support breastfeeding in these families. The nature of FIFO work means that these families live a unique lifestyle, and as such their experiences are not well understood in relation to breastfeeding. Insight into their experiences, such as that provided in this research, should inform tailored and appropriate resources and support for FIFO families in the early years of parenting to promote the uptake and continuation of breastfeeding in this group. There are modifiable factors that are positively associated with breastfeeding continuation such as breastfeeding intention, self-efficacy, and support (Meedya et al., 2010), and interventions should aim to address these factors according to the needs and experiences of FIFO families. The recommendations, developed in response to both the findings of this study and existing breastfeeding literature, include a tailored resource for current or potential FIFO families, providing information and support in the area of breastfeeding whilst living a FIFO lifestyle, as well as the development of resources and training materials for both breastfeeding support providers and FIFO employers. These recommendations are in accordance with current strategic directives for promoting breastfeeding in WA, namely the ANBS (COAG, 2019) and the WA Sustainable Health Review (2019), and therefore their implementation should be feasible and achievable.

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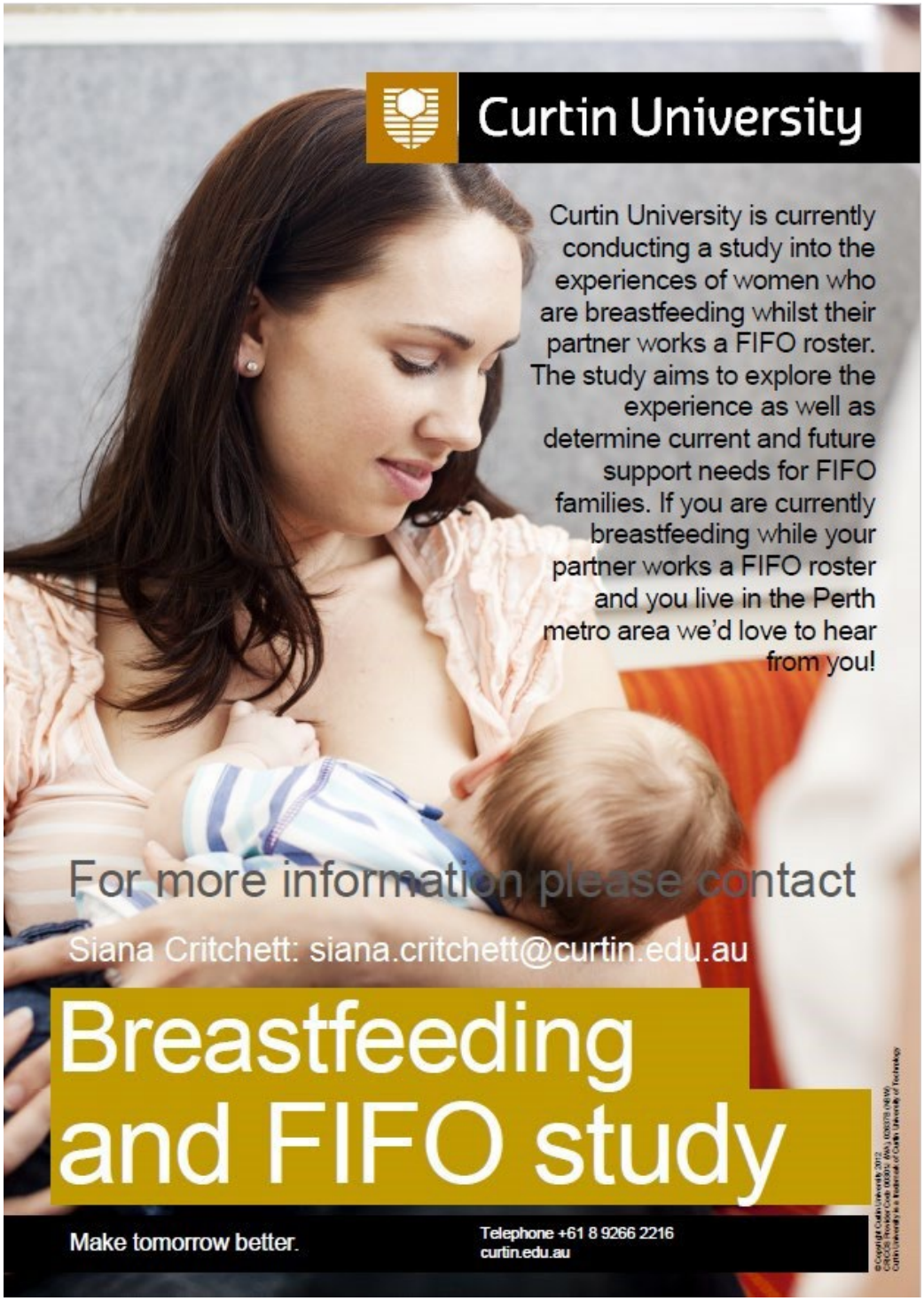
APPENDIX 1 – Study flyer



APPENDIX 2 - Interview guide

- Tell me about your experience of breastfeeding your child whilst your partner works a fly-in, fly-out roster
- What were your thoughts about feeding choice before you had your baby? Did you always intend to breastfeed as you currently are?
- Did you breastfeed your other children? If so was your partner working a FIFO roster at the time?
- What things do you see as helpful for you to continue breastfeeding?
- What things do you see as being barriers or making it difficult for you to continue breastfeeding?
- Do you feel supported to breastfeed?
- What kind of support do you have around you that you use to help you continue breastfeeding?
- Are there other means of support that you think would be beneficial in helping you, or other women whose partners' are FIFO, to continue breastfeeding?

APPENDIX 3 - Demographic information

1. Age: _____
2. Number of children: _____
3. Method of birth (please also state if you were induced):

   _____
4. What is your highest level of completed education:

   _____
5. Do you currently work? If so, how often do you work?

   _____
6. How did you intend to feed your baby when they were born?

   _____
7. What is your partner's roster? Please specify days or weeks e.g. 8 days on/ 6 days off or 3 weeks on/ 1 week off

   _____
8. How long have you and your partner been living a FIFO lifestyle?

   _____

APPENDIX 4 - Participant information sheet

Date

Dear _____,

My name is Siana Critchett and I am a Registered Nurse/ Midwife and a Postgraduate student in the School of Nursing and Midwifery at Curtin University. For my research thesis I am conducting a study that will explore the experiences of breastfeeding mothers whose partners are currently working a fly-in, fly-out roster. The aim of the study is to identify, from your perspective, things that assist you to continue breastfeeding and things that make it difficult to continue breastfeeding whilst your partner works a FIFO roster. The study is also interested in the sources of support that you currently use and/or have access to, as well as potential sources of support that you feel would be beneficial in the future.

Your role

If you decide to participate, you will be asked to meet face to face with myself to discuss your experiences of breastfeeding while you are living a FIFO lifestyle. The interview will take approximately one hour to complete and will be conducted at a place that you choose to be convenient, and at a time that is suitable to you and me. You are also welcome to bring a support person (other than your partner) to the interview with you if you would like to. As well as a discussion of your experience, there is a short questionnaire of demographic information to fill out. I will be audio taping the interviews so that I am able to focus on our discussion and so that I don't miss or lose any information.

Confidentiality

All the information you provide is strictly confidential, although please be aware that as a Registered Nurse/ Midwife I am legally obliged to report any child sexual abuse. The only people other than myself who will have access to the information that you provide will be my academic supervisors. Once the interview is completed your name is removed from the data and thus information will be published in a final thesis with no names attached. In this way you are not identifiable in the finished report or any publications. Once the study is complete the results may be published in an appropriate academic forum (for example academic journals).

Consent to participate

Thank you very much for your interest in participating in my study, and should you have any further queries at all please contact me on 9266 2216 or via email at s.critchett@postgrad.curtin.edu.au. Alternatively you may contact my supervisor Dr Ravani Duggan on 9266 2055 or via email at r.duggan@curtin.edu.au.

Your participation is *entirely voluntary and you are free to withdraw at any point without consequence to you.* If you would like to participate, please fill in the attached consent form with preferred contact number and I will be in touch.

This study has been approved by the Human Research Ethics Committee of Curtin University (approval number XXXXXX). If you have a complaint on ethical grounds please contact the Human Research Ethics Committee Secretary at:

Phone: 9266 2784 **or** hrec@curtin.edu.au **or** in writing C/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth WA 6845.

Once again thank you kindly, your interest in participating in this research is greatly appreciated.

Siana Critchett

RN RM B(Nurs) PG Dip (Mid)

APPENDIX 5 - Informed consent form

I, _____, have read the participant information sheet and agree to be interviewed for the purposes of this study.

I have had the opportunity to ask questions about this study and feel that any questions I have asked have been answered to my satisfaction.

I am aware that the interview will be audiotaped and that I will not be identifiable in any published material.

I understand that I am under no obligation to participate and that I am free to withdraw at any time.

Signed:

_____

Print name:

_____

Date:

_____

Preferred contact number and time:

_____