INTERSECTING IDENTITIES: LABOUR AND DELIVERY NURSES' EXPERIENCE OF PREGNANCY AND CHILDBIRTH

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Abstract

L&D nurses play an integral role in the childbirth experience. With a predicted shortage of nurses and an increasing number of women experiencing complications in pregnancy, it is essential that the needs of L&D nurses are understood so they can continue to meet the growing demands of their profession. Although research pertaining to midwifery and L&D nursing is growing, studies pertaining to pregnant registered nurses working on L&D are limited. The purpose of this qualitative descriptive study was to begin to address this gap. My primary research question was: "What is the pregnancy and birth experience of a registered nurse working on L&D?" To address this question, data were collected through individual, semi-structured interviews completed via videoconferencing with nurses who worked while pregnant on L&D units. From these data, thematic analysis resulted in one overarching theme of transformation. The thematic arc of transformation captures the transitions of a pregnant nurse's identity as she becomes pregnant, experiences her own birth story, returns to practice, and views birthing with new eyes because of her own journey. The theme of transformation is supported by three categories, with each category representing unique transitions the nurse goes through: (a) balancing act, (b) the power of the sisterhood, and (c) becoming a mother. Providing a description of an L&D nurse's pregnancy and childbirth experience can inform how human and professional resources are allocated and implemented for L&D nurses who work while pregnant, which may increase the retention and well-being of these skilled healthcare providers.

Keywords: L&D, pregnancy, childbirth, occupation, emotional well-being

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Table of Contents

List of Tables

List of Figures

Chapter One: Introduction

L&D registered nurses (RN) are essential care providers whose actions guide in the progression of labour and who are critical in achieving optimal birth outcomes (Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2018; Lake et al., 2019). Throughout a woman's labour and childbirth, RNs integrate nursing theory, specialized psychomotor skills and clinical judgement to provide care that is patient-centred, individualized, and compassionate, all while incorporating the woman's own personal support system into care (AWHONN, 2018). In addition to the clinical aspects of nursing, there is an art of nursing (Elmir et al., 2017). The art of nursing is informed by the humanness of both the nurse and the patient, where nurses bring forward pieces of themselves into their interactions and care for patients (Elmir et al., 2017). While this is an essential part of the nursing role (Elmir et al., 2017), at times, the intersection of the personal and professional self may create tension.

Studies associated with midwifery and L&D (L&D) nursing have indicated that interventions for maternal and newborn health provided by these workers "could avert 67% of maternal deaths, 64% of neonatal deaths and 65% of stillbirths" (World Health Organization, 2022, p. 17). In Canada in 2018, there were 32 maternal deaths (Statistics Canada, 2019). Maternal death is defined as the death of a women while pregnant, or within 42 days of termination of pregnancy ("Spotlight," para. 1). This death is a result of any cause related to or aggravated by pregnancy or its management and does not include accidental or incidental causes ("Spotlight," para. 1). Between 2008 and 2018, the maternal mortality rate ranged from 4.5 to 8.7 deaths per 100,000 live births, with the maternal mortality rate being 8.3 deaths per 100,000 live births in 2008 ("Spotlight," para. 3). The infant mortality rate between 2009-2011 was 4.90 per 1,000 live births, with Alberta having an infant mortality rate of 5.57 deaths per 1,000 live births

(Conference Board of Canada, 2015). Interestingly, the average infant mortality rate in Alberta is almost two times higher than other developed countries like Japan, Denmark, and Sweden, whose average infant mortality rate is 3 per 1,000 live births ("How do the provinces and territories rank relative to Canada's peers," para. 1). Thus, these statistics demonstrate the need for retention of skilled L&D nurses in Canada as they aid in the outcome of a healthy childbirth experience for both mother and infant. Yet, it is anticipated that the current number of L&D nurses will not be enough to meet the growing needs of mothers in Canada, as pregnancy continues to increase in complexity (Nowrouzi et al., 2015). Therefore, more investigation into the experience of being an L&D nurse is needed to support these skilled healthcare providers during each stage of their career.

Until recently, research pertaining to L&D nurses' experiences has been lacking. The lack of research surrounding this population has led to a poor understanding of their unique experiences and may contribute to job attrition (Beck et al., 2015; Nash et al., 2018; Wright et al., 2018). An area of inquiry that has not been examined is the subjective experience of being pregnant while working on L&D from the perspective of L&D nurses themselves. Thus, a research study is warranted on this unique population to promote understanding of their needs and potentially increase job satisfaction and nurse retention. This was further supported based on findings by Quinn's (2016) study, where the author found participants who worked as a nurse while pregnant were between 25-35 years of age, with the mean age of participants being 29 years. This finding suggests that nurses who are pregnant while working as an RN are relatively young and, therefore, have the potential for long-term future employment as an RN prior to retiring.

Although long-term employment appears to be feasible for women who work while pregnant on L&D due to their young age, the environment of an L&D unit may promote attrition because of its stressful nature (Beck & Gable, 2012). Moreover, nurses who do continue to work on L&D while pregnant may experience harm for both maternal and fetal well-being. We do know that maternal psychological stress has been conceptualized as a teratogen in pregnancy and that it can create poor perinatal and developmental outcomes (Glover, 2014). Indeed, considerable evidence has suggested that if a mother is stressed, anxious, or depressed while she is pregnant, her child is at higher risk for emotional, behavioural, and cognitive problems (DiPietro, 2012; Glover, 2014). Given the intricate physiological relationship between the developing fetus and pregnant woman, it is not surprising that stress and physical strain experienced by the mother can impact the developing infant.

Although physiological evidence on pregnancy outcomes exists, research has not explored how L&D nursing can emotionally and physically impact a nurse's own pregnancy. Thus, more investigation into the subjective experience of being a pregnant nurse while working on L&D is needed. I begin this chapter by presenting the background information on the research topic and the rationale and purpose of the study. I also discuss the significance of this study, my ethical considerations, and approach to research, as well as significant findings. Lastly, I provide an overview of the contents of the thesis.

Background

L&D Nursing

L&D nurses provide patient-centred care that requires not only knowledge of the L&D process but also the ability to be a compassionate caregiver (Murray & Huelsmann, 2020). These professionals' practice in a variety of settings, including acute care L&D units, birthing suites,

and L&D recovery rooms (Murray & Huelsmann, 2020). Their duties may include monitoring pregnant women in prenatal care, L&D, and post-partum (De Medeirosa et al., 2016). Additionally, L&D nurses may assist with the care of pregnant women admitted to other units: for example, patients who have been admitted to the intensive care unit and who also have high-risk pregnancies and who might have co-morbidities (Murray & Huelsmann, 2020). Indeed, these skilled care providers are crucial in the betterment of both maternal and fetal health: L&D nurses can help shorten women's labour, decrease the need for analgesia, and potentially decrease the necessity for caesarean sections (De Medeirosa et al., 2016). The role of an L&D nurse also entails collaborating with the multidisciplinary team where the RN helps to build relationships among team members, thus enhancing the patient-centred approach to care (De Medeirosa et al., 2016).

Working as a Registered Nurse During Pregnancy

While working as a pregnant RN has received considerable researcher attention; comparatively, there has been a more limited focus on L&D nurses' experience while pregnant. The current body of knowledge that does exist related to working as a nurse while pregnant on surgical and medical floors has focused on the impact of shift work, long working hours, and ergonomic demands (Davari et al., 2018; Lawson et al., 2009; Whelan et al., 2007). Pre-term delivery (delivery before 37 weeks) is a risk factor encountered by pregnant RNs (Whelan et al., 2007), specifically for those who work shift work, as they are three times more likely to deliver prematurely (Lawson et al., 2009).

In relation to emotional well-being for nurses, specific socio-demographic variables of L&D nurses that pose an increased risk for stress are age, experience, and being a mother (De la Fuente-Solana et al., 2019). Younger and less experienced nurses seem to have more stress, with

the variable of being a mother being viewed as negatively impacting professional satisfaction due to the increased role strain experienced (De la Fuente-Solana et al., 2019). Thus, it appears that the demands of the profession are in constant conflict with the L&D nurse's obligation to her growing family, potentially making job attrition more likely (De la Fuente-Solana et al., 2019). Although an important finding, there was a paucity of research into the experience of being a pregnant RN working on L&D and how working in this area of nursing practice affects the nurse's own birth experience. To create policies, enhance practice, increase job satisfaction, and prevent job attrition for nurses who are pregnant or planning on becoming pregnant while working on an L&D unit, more research into this unique experience is warranted.

Research Problem

In Alberta, Canada, 34.9% of nurses are under 35 years of age (Canadian Institute for Health Information, 2019) and of potential childbearing age. With a predicted increase in the shortage of nurses, it is essential that nurses feel that they are valued and satisfied in their jobs (Nowrouzia et al., 2015). Unfortunately, caregiver fatigue and workplace stress are predominant reasons for attrition from L&D units (De la Fuente-Solana et al., 2019), thus, it is of utmost importance that policy makers, employers, and supervisors understand how to provide support to nurses working in this area to decrease professional stress. Events contributing to stress for L&D RNs include working with women who experience a fetal demise, a shoulder dystocia, neonatal resuscitation, and neonatal death (Beck, 2013; Sheen et al., 2016). Therefore, it is possible that the stress experienced by a pregnant RN working on L&D will not only impact her health during her pregnancy but also potentially her fetus's health due to the influences of maternal stress on fetal development previously described. It is of utmost importance then, that a research study is

conducted to explore the unique needs of pregnant L&D nurses during their pregnancy to promote maternal well-being, and thus, potentially, fetal well-being as well.

Organizational factors, such as lack of professional leadership, intense responsibility, understaffing, and lack of resources for nurses, can also affect job satisfaction and increase nurses' stress and frequency of professional burnout (Lake et al., 2019). De la Fuente-Solana et al. (2019) suggested that L&D nurses specifically reflect higher levels of burnout and job dissatisfaction, with 44-56% of nurses who work in L&D experiencing burnout. Causes of burnout cited by L&D nurses include heavy workload, witnessing traumatic births, a lack of debriefing, and performing physically demanding work (Beck, 2013; Beck & Gable, 2012; Elmir et al., 2017). With burnout rates being especially high among L&D nurses, an investigation into how this may change or impact a pregnant nurse working in this area is warranted.

Last, the change in maternal healthcare policy and practice from allowing the time for nurses to focus on being compassionate caregivers (Nash et al., 2018) to now being a highly mechanized and medicalized practice area has left nurses feeling that their clinical judgement and professional autonomy may no longer be valued (De la Fuente-Solana et al., 2019). Indeed, despite the many benefits of continuous labour support by L&D nurses for patient outcomes, L&D RNs are challenged by competing priorities, as staffing levels often do not allow nurses to provide the type of care that they view as essential (Beck, 2013; Nash et al., 2018). Patient acuity levels have risen due to obesity, advanced maternal age, comorbidities, and poor lifestyle choices (e.g., smoking, substance use) forcing nurses to become focused on technology and documentation rather than hands-on patient care (AWHONN, 2018). Combined with L&D nurses working at times a 40–70-hour work week (Celikkalp & Yorulmaz, 2017), along with shift work and the heavy lifting required, it is perhaps not surprising that L&D nurses feel

vulnerable and at risk for compassion fatigue (De la Fuente-Solana et al., 2019; Elmir et al., 2017). These factors, however, have not been explored through the lens of a pregnant RN working on L&D.

Although the retention of L&D nurses is essential to promoting maternal and fetal well-being through the care they provide, pregnant L&D nurses remain an understudied and underrepresented population in the current literature. As continuous labour support by L&D nurses is correlated with the outcome of a healthy childbirth (AWHONN, 2018), it is important that we understand how to promote emotional well-being in L&D nurses, including when they are experiencing their own pregnancies.

Personal Connection

My work as an L&D nurse brings me so much joy: I get to witness the strength women possess as I guide them through the birthing process. It is truly remarkable what the human body is capable of and how powerful women are in bringing forward new life. Yet, it is not always a living infant that women birth. Too often, I witness women showing courage as they deliver a baby that they know will not be born alive.

In my practice as an L&D nurse, I have witnessed co-workers who are friends give birth on the L&D unit where we work. I have helped a nurse who was 24-weeks pregnant assess a mother who was also 24-weeks pregnant, who came in stating she had not felt her baby move. I remember how we found no heartbeat. In that moment, I questioned how I could support this nurse … my co-worker … my friend, as we explained to the patient that we could not find the baby's heartbeat and that this could mean the baby had died. I could see how she was internalizing this and how she placed her hand to her belly, perhaps in a silent prayer that her infant would have a different fate.

My interest in this topic, therefore, is deeply personal. Not only did I wish to understand the experiences of my co-workers while they are pregnant and working on L&D in order to help them, but I also wanted to help myself when it is my time to have this experience. Although I applaud my coworkers' strength as they work while pregnant and witness both the miracle and the loss that comes with this area of practice, I do not know if I can carry the weight of loss with me while I am pregnant.

Purpose Statement

The purpose of this descriptive qualitative research study was to explore the experience of being a pregnant registered nurse while working on a L&D unit. I conducted this study with the intent of understanding the unique impact of one's professional occupation on one's own personal pregnancy and childbirth experience. In addition, I sought to understand how each participant perceived their professional practice after giving birth, and I explored any changes to practice that occurred due to their personal childbirth experience. Through gaining an understanding of what it is like to be pregnant and work on L&D as an RN, the findings from this study might inform the creation of policies and practices that promote emotional and physical well-being for this population, including for my co-workers who are like my own family.

Research Questions and Objectives

Based on my review of the literature and my own experience working on L&D, my primary research question was: "What is the pregnancy and birth experience of a registered nurse working on L&D?" Sub-questions I explored included: How are pregnant nurses who work on L&D treated by patients and co-workers? How does her nursing knowledge affect her own birth

story? How does experiencing her own pregnancy and childbirth impact her professional practice and desire to return to this practice area?

Specifically, my objectives included:

1. To describe the experience of being a pregnant RN working on an acute care L&D unit.
2. To explore with the participants how their prior nursing knowledge influenced their decisions and outcomes of their own childbirth experience.
3. To describe what participants found to be supportive and detrimental to their well-being while working as a pregnant RN on L&D.
4. To explore if having a child while working on L&D impacted the participant's decision to return to practice after maternity leave on an L&D unit.
5. To examine any changes to professional practice that are perceived to have occurred due to having experienced their own pregnancy and childbirth.

Significance of the Study

Research that focuses on the subjective experiences of being pregnant while working on L&D can address not only relevant gaps in the literature but can also provide insight into the unique challenges experienced by this population. As previously stated, until this experience is understood, we are unable to fully support maternal well-being for this population and, potentially, fetal well-being as well. Moreover, without evidence-based policies and strategies that support pregnant nurses working on L&D, there is a risk that attrition from L&D units might continue to increase. It is possible that by not addressing this gap, pregnant women may be in jeopardy of not receiving continuous one-to-one L&D nurse support because of a nursing shortage.

Research Approach

To explore this experience, I conducted a qualitative descriptive study with a naturalistic approach to inquiry. This is an appropriate method, as it allowed me to capture the subjective experience of each participant by producing thick descriptions that are close to the verbatim data (Sandelowski, 2000). A naturalistic approach to inquiry acknowledges that multiple realities exist and are constructed based on the individual, subjective experience (Lincoln & Guba, 1985). By utilizing this framework and research method, I gained an understanding of what it is like to be pregnant and work on L&D from each participant's perspective, which led to the over-arching theme of transformation.

Overview of Findings and Discussion

The findings of this study led to the over-arching theme of transformation, with three categories created representing each unique transition that a pregnant L&D nurse goes through during her pregnancy and childbirth. These three categories are (a) balancing act, (b) the power of the sisterhood, and (c) becoming a mother. During each category, a nurse experiences transitional periods impacting how she perceives her body, her co-workers, and her identity as a nurse and mother.

It appears that a pregnant L&D nurse struggles to balance her personal needs with her professional responsibilities, which is explored in detail in the category balancing act. As her pregnancy progressed, participants reported relying heavily on the support of co-workers, which was perceived as being beneficial for their well-being. Yet, this support also came at a cost as discussed in the category the power of the sisterhood. In this category, participants shared how they were scrutinized for the choices they made in their own pregnancies, specifically if the choice the pregnant nurse made did not align with the popular opinion of co-workers.

Consequently, it appears that working as an L&D nurse while pregnant shapes a woman's perspective of her own birth experience and the choices she makes in her pregnancy and childbirth. This professional influence is explored in detail in the final category: becoming a mother.

As stated, the three categories led to the creation of the overarching theme of transformation, specifically the transformation of a women's identity as she becomes a mother. The concept of identity was central to this study. Every participant in this study indicated that working as a nurse while pregnant on L&D influenced her sense of self, her childbirth experience, and her perception of her nursing practice. As a result, I believe the concept of identity is essential to the understanding of working while pregnant as a nurse on L&D. The concept of identity will be analyzed in the discussion portion of this thesis in three areas of identity: as a person, as a nurse, and as a mother.

Overview of Thesis

In this chapter, I have provided background information on my topic, my research questions, my personal connection to this topic, and the significance of this study in relation to both nursing and general maternal and fetal well-being. Next, in Chapter 2 of this research study, I will explore what is known about my topic through a narrative literature review. Following this, in Chapter 3, I will explore my philosophical orientation, biases, research design, and analysis process, which led to the findings briefly discussed in the previous section. The findings of this thesis will be more thoroughly discussed in Chapter 4 of this study. In Chapter 5, I will discuss the major findings of this study and highlight the nursing implications and recommendations for education and future research that were born out of this study.

It is my intent that by raising awareness of a pregnant L&D RNs' subjective experiences through this study, it will have the potential to inform policymakers, employers, and other healthcare workers on how best to support pregnant RNs working in this area and prevent undue traumatic exposure to this potentially vulnerable population.

Summary

The purpose of this qualitative descriptive study was to explore the experience of being pregnant while working on L&D and, by doing so, address the gaps and questions identified in this chapter. Although numerous studies exist examining the stressors that L&D nurses face (Beck et al., 2015; Nash et al., 2018; Wright et al., 2018), there is a lack of research examining the experience of working in this area while pregnant. L&D nurses are instrumental in providing care that promotes optimal maternal and newborn health; therefore, it is essential that these skilled care providers work in an environment that promotes emotional and physical well-being (AWHONN, 2018). In Chapter 2, I will explore what is currently known about this topic through a narrative literature review.

Chapter Two: Review of the Literature

I conducted a narrative literature review to explore the topic of being pregnant while working on L&D (L&D) as a registered nurse (RN). The purpose of a narrative literature review is to determine what is known about a topic and to identify any gaps that may exist in the current body of knowledge (Green et al., 2006). This approach was well suited to my topic of interest and research method, as I wanted to capture the voice of pregnant nurses working on L&D units. Thus, by undertaking a narrative literature review, I was able to highlight and explore themes in the current body of knowledge related to the experience of working on L&D while pregnant. I was also able to identify areas of potential inquiry for this proposed study (Green et al., 2006). Specifically, by understanding what is known about this topic, I was able to frame my research question to address gaps in the current body of knowledge. Lastly, by conducting this review, I was able to understand how a qualitative descriptive study can provide voice to this experience, which is currently lacking in this area of inquiry.

In this review, I will present the search strategies I used to retrieve relevant research articles. Next, I will discuss what is known about working as an RN while pregnant and the culture of midwifery/L&D nursing. Lastly, as there were only two articles that explored my specific topic of being pregnant while working on L&D, I will provide an in-depth analysis of these studies where the authors explored the occupational risks and changes to pregnancy outcomes that occur from being pregnant while working on L&D.

Search Strategy and Results

For this literature review, I used the databases of Cumulative Index to Nursing and Allied Health (CINAHL), Academic Search Complete, Pub med via Ovid, and Google Scholar. I searched for peer-reviewed scholarly articles published between 2005 and 2020. I included a

span of 15 years within my search criteria, as nursing is a constantly evolving profession (Nowrouzia et al., 2015), and I felt this would give me an adequate range of contemporary issues researchers have examined. As my Master of Nursing program progressed, I amended this search to include any new articles from 2021, yet none were found to be relevant to this topic. That said, because of the lack of research on pregnant nurses working on L&D specifically, it was necessary to include studies focused on RNs working on other acute hospital units to gather a breadth of research to support a summary of current knowledge. I felt that it was reasonable to only include nurses working on acute hospital units in my review because my population of interest, L&D RNs, work predominantly in acute hospital settings. RNs working in acute hospital settings have unique job requirements when working in hospitals, such as shift work and heavy lifting, in comparison to community roles (Rita, 2011). Articles were included if they focused on midwives or L&D nurses as research participants, but they were excluded if the focus was on patient care or outcomes or if the nurse participants practiced in a long-term care or community setting.

Guided by Elmir et al.'s (2017) meta-ethnographic synthesis of adverse events experienced by midwives and nurses who work in L&D, the key search terms I used were: obstetrics, obstetrical nursing, L&D, intrapartum nursing, registered nurse, pregnancy, job strain, working while pregnant, childbirth experience, and occupational stress. Boolean operators (AND, OR) were also applied to expand the search process. This search process yielded 26 articles that represent three mixed-method studies, 11 qualitative studies, and 12 quantitative studies. Based on this search, it became apparent to me that there is limited research into the experience of being a pregnant RN working on an L&D unit, although there is a plethora of research that explored working on an L&D unit as a midwife or RN who is not pregnant. I have

provided a table listing the articles included in this research review (see Table 1). As previously stated, only two of these articles focused specifically on being a pregnant RN working on L&D. These two articles are by Celikkalp and Yorulmaz (2017) and Watson et. al. (2016).

Table 1: *Articles Included In Literature Review*

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Arbour et al.	2010	Rates of congenital anomalies and other adverse birth outcomes in an offspring cohort of registered nurses from British Columbia, Canada.	Quantitative Cohort Study	23,222	RN cohort had lower rates of congenital anomalies and low-birth weight infants compared to general population.	More research is needed to see if specific sub-populations within the RN cohort are at risk.
Beck et al.	2015	A mixed-methods study of secondary traumatic stress (STS) in certified nurse-midwives: Shaken belief in the birth process	Mixed-Methods: Convergent Parallel Design	473 for quantitative portion, 246 for qualitative	29% of the certified nurse-midwives reported high to severe STS.	The midwifery profession should acknowledge STS as a professional risk.
Beck	2011	Secondary traumatic stress in nurses: A systematic review	Quantitative Systematic Review	Seven studies	Presence of secondary traumatic stress was reported in forensic nurses, emergency department nurses, oncology nurses, pediatric nurses, and hospice nurses.	More research is needed into secondary traumatic stress in sub-populations of nursing.
Beck	2013	The obstetric nightmare of shoulder dystocia: A tale from two perspectives	Qualitative: Krippendorff's Content Analysis	Two studies	It was striking how similar the perspectives of mothers and their nurses were regarding a shoulder dystocia birth.	Best practices for shoulder dystocia needs to include support and interventions for the nurses themselves.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Beck & Gable	2012	A mixed-methods study of secondary traumatic stress in labor and delivery nurses	Mixed-Method: Convergent Parallel Design	464 L&D Nurses	35% of L&D nurses reported moderate to severe levels of secondary traumatic stress.	Nurses need to consider the possible impact their work may have on them and take preventative measures to address their current symptoms.
Bride et al.	2007	Measuring compassion fatigue	Quantitative: Systematic Review	10 studies	All instruments included in this study are appropriate for screening for compassion fatigue.	For some clinicians, the experience of compassion fatigue may become so severe as to interfere with their clinical effectiveness and their personal mental health. It is for this reason that ongoing monitoring is necessary.
Celikkalp & Yorulmaz	2017	The effect of occupational risk factors on pregnancy and newborn infants of pregnant midwives and nurses in Turkey: A prospective study	Quantitative: Prospective Study	127 pregnant L&D nurses and midwives	A total of 46.5% of the 127 pregnant nurses developed a vaginal hemorrhagic complication during their pregnancy, 11.0% had a spontaneous abortion, and 20.5% had given birth prematurely.	This study showed that some occupational characteristics of pregnant nurses negatively impact mother and fetus. The development of strategies and intervention to protect this population must be addressed.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Cramer & Hunter	2018	Relationships between working conditions and emotional well-being in midwives	Mixed Methods: Thematic Literature Review	44 papers (22 quantitative, 17 qualitative, 4 mixed methods)	Various types of poor emotional well-being in midwives correlate with a variety of interrelated working conditions, including low staffing/high workload, low support from colleagues, lack of continuity of carer, challenging clinical situations, and low clinical autonomy.	While certain conditions that correlate with midwives' well-being are non-modifiable, several crucial variables, such as staffing levels and continuity of carer, are within the control of organisational leadership. Future research and interventions should focus on these modifiable risks
Creedy et al	2014	Prevalence of burnout, depression, anxiety, and stress in Australian midwives: A cross-sectional survey.	Quantitative: Cross-Sectional Survey	1,037 participants	Using a CBI subscale cut-off score of 50 and above (moderate and higher), 64.9% (n = 643) reported personal burnout; 43.8% (n = 428) reported work-related burnout; and 10.4% (n = 102) reported client-related burnout	Prevalence of personal and work-related burnout in Australian midwives was high, with symptoms of depression, anxiety and stress noted. Further research is needed to support this population.
Davari et al	2018	Shift work effects and pregnancy outcome: A historical cohort study	Quantitative: Cross-Sectional Study	429 participants	Working in a rapid cycling schedule of shift work may cause an increase in the incidence of pre-term delivery in pregnant mothers.	A clearly designed work plan for pregnant women and women planning to become pregnant is useful.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
De la Fuente-Solana et al.	2019	Prevalence, related factors, and levels of burnout syndrome among nurses working in gynecology and obstetrics services: A systematic review and meta-analysis	Quantitative: Systemic Review and Meta-Analysis	14 relevant studies with 464 nurses as participants	The following prevalence values were obtained: emotional exhaustion 29%, depersonalization 19%, and low personal accomplishment 44%.	Nurses working in obstetrics and gynecology units present high levels of burnout syndrome. More research is needed to support this unique sub-population.
Elmir et al.	2017	A meta-ethnographic synthesis of midwives' and nurses' experiences of adverse labour and birth events	Qualitative: Meta-Ethnographic Synthesis	11 qualitative studies included	Four major themes were (a) feeling the chaos; (b) powerless, responsible, and a failure; (c) "It adds another scar to my soul;; and (d) finding a way to deal with it.	Midwives and nurses feel relatively unprepared when faced with a real-life labour and birth emergency event. Organisational and collegial support need to be available to enable these health professionals to talk about their feelings and concerns.
Figley	1995	Compassion fatigue: Coping with secondary traumatic stress	Qualitative: Clinical Overview	N/A	Compassion fatigue is prevalent among front-line healthcare workers, including registered nurses.	More research is needed to identify how to support healthcare workers and reduce compassion fatigue
Geraghty et al.	2019	Fighting a losing battle: Midwives' experiences of workplace stress	Qualitative: Glaserian Grounded Theory	21	The core category that emerged from the data labelled 'Fighting a Losing Battle' consisted of the causal, contextual, and conditional factors that together form the core problem faced by the midwives	Organisations should focus their efforts on improving job satisfaction for midwives, finding ways to alleviate stress that impacts upon the midwifery role, and also should consider focused preparation for all midwives before they coordinate clinical areas.

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Halperin et al.	2011	Stressful childbirth situations: A qualitative study of midwives	Qualitative Descriptive Study	18	Two main themes were identified. The first theme focused on reactions to stressful childbirth situations and their impact on midwives. The second theme related to coping with stressful situations, focusing on coping difficulties, and suggestions for change.	Stressful childbirth situations can have a long-term impact on midwives' professional and personal identities. Midwives need to feel supported and valued in order to deal with emotional stress.
Katz	2012	Work and work-related stress in pregnancy	Quantitative: Clinical Review	N/A	Stressful work increases the risks of miscarriage, pre-term labor, pre-term birth, low birth weight, and preeclampsia.	A careful work history should be part of every preconception and early pregnancy visit.
Lawson et al.	2009	Occupational factors and risk of pre-term birth in nurses	Quantitative: National Cohort Study	6,977	Part-time work (<or= 20 hours a week) was associated with a lower risk of pre-term birth. Working nights was associated only with early pre-term birth (< 32 weeks of gestation).	This data suggest that night work may be related to early but not late pre-term birth, whereas physically demanding work did not strongly predict risk.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Nash et al.	2018	Midwives' experiences of caring for women with early pregnancy loss in an Irish maternity hospital	Qualitative Descriptive Study	8	Themes identified were: coping with the experience of early pregnancy loss, compassionate care for women and midwives, and what midwives found difficult.	Midwives identified the need for further education in the area of early pregnancy loss, time out during the shift to debrief, and counselling for staff. Structured support is needed for midwives and other health professionals where there is repeated exposure to early pregnancy loss.
Quinn	2016	A grounded theory study of how nurses integrate pregnancy and full-time employment: Becoming someone different	Qualitative: Grounded Theory	20 participants	The basic social process, "becoming someone different," with four core categories: (a) "looking different, feeling different,"(b) "expectations while expecting," (c) "connecting differently," and (d) "transitioning labor."	Research with pregnant nurses from other countries, nurses working in settings other than acute care, and multiparous nurses is needed to further expand on these findings.
Rice & Warland	2013	Bearing witness: Midwives' experiences of witnessing traumatic birth.	Qualitative: Descriptive Study	10	Stuck between two philosophies: 'What could I have done differently', and 'Feeling for the woman,' emerged as the main themes from the research.	Further research into these areas is warranted. Better understanding of how witnessing traumatic birth impacts on midwives and what kind of support after these experiences is required to ensure midwives are equipped to cope when witnessing traumatic birth.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Rita	2011	Occupational hazards for pregnant nurses	Qualitative: Clinical Review	N/A	Depending on her working environment, specific immunities, and stage of pregnancy, a pregnant nurse may find it difficult to avoid teratogenic and fetotoxic exposures, as well as working conditions that could jeopardize her pregnancy.	A clinical review of the occupational hazards faced by pregnant nurses can be useful to the concerned nurse or healthcare system, as can suggestions on ways to reduce risk and a list of pertinent occupational safety resources
Schrøder et al.	2016	Psychosocial health and well-being among obstetricians and midwives involved in traumatic childbirth	Quantitative: National Survey	2,098	Midwives reported significantly higher scores than obstetricians, to a minor extent during the most recent four weeks and to a greater extent immediately following a traumatic childbirth scale, indicating higher levels of self-reported psychosocial health problems. Sub-group analyses showed that this difference might be gender related.	As many as 85% of the respondents in this national study stated that they had been involved in at least one traumatic childbirth, suggesting that the handling of the aftermath of these events is important when caring for the psychosocial health and well-being of obstetric and midwifery staff.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Sheen et al.	2015	The experience and impact of traumatic perinatal event experiences in midwives: A qualitative investigation.	Qualitative Investigation Following Postal Survey	35	High-distress midwives were more likely to report being personally upset by events and to perceive all aspects of personal and professional lives to be affected.	Findings indicate a need to consider effective ways of promoting and facilitating access to support, at both a personal and organisational level, for midwives following the experience of a traumatic perinatal event.
Sheen et al.	2016	What are the characteristics of perinatal events perceived to be traumatic by midwives?	Qualitative: Thematic Analysis of Previous Postal Survey	421 participants in postal survey	Traumatic events had a common theme of generating feelings of responsibility and blame. For witnessed events those that were perceived as traumatic sometimes held personal salience, so resonated in some way with the midwife's own life experience.	Understanding the characteristics of the events that may trigger this perception may facilitate prevention of any associated distress and inform the development of supportive interventions.
Watson et al.	2016	Exploring the relationship between obstetrical nurses' work and pregnancy outcomes.	Quantitative: Cohort Study Survey	95 participants	Full-time obstetrical nursing work is a predictor of reduced birth weight, but not of pre-term birth when compared to outcomes of obstetrical nurses working part time.	Further research evaluating work modifications during pregnancy is indicated to improve birth outcomes.

Table 1 continued

Author	Year	Title of Study	Type of Study	# of Participants	Major Findings	Conclusions/ Recommendations
Whelan et al.	2007	Work schedule during pregnancy and spontaneous abortion	Quantitative: Cohort Study Survey	7,688	Compared with women who reported usually working “days only” during their first trimester, women who reported usually working “nights only” had a 60% increased risk of spontaneous abortion. Women who reported working more than 40 hours per week during the first trimester were also at increased risk of spontaneous abortion	Nightwork and long work hours may be associated with an increased risk of spontaneous abortion. Further studies are needed to determine whether hormonal disturbances attributed to night work affect pregnancy outcome.

According to the researchers cited in the review presented in Table 1, the role of a midwife is comparable to that of an L&D nurse (Beck et al., 2015; Elmir et al., 2017). Therefore, for my review, the findings from midwifery and L&D nursing research are discussed concurrently as noted by my inclusion of midwifery articles depicted in Table 1. The similarities in practice include emotionally supporting women in labour, knowledge of anatomy and physiology, physical practice (i.e., bending, lifting), and ethical practice requirements (Elmir et al., 2017). Yet, it is important to acknowledge the differences in their practice, including length of relationship with patients, responsibility, and working hours (French, 2019). Midwives care for pregnant women throughout their pregnancy, during birth, and post-partum, whereas an L&D nurse is generally only present during labour (French, 2019). Moreover, L&D nurses, at times, follow the direction of an obstetrician or midwife; therefore, midwives arguably have overall more responsibility for maternal and fetal well-being (French, 2019). Working conditions also comprise an important difference: L&D nurses work scheduled shiftwork, whereas midwives often operate on an on-call basis or out of clinic (French, 2019; Quinn, 2016).

To begin this review, I will explore the theme of being pregnant and practicing as an RN. As I have noted, my search yielded articles exploring the population of nurses who are pregnant and working on various types of acute hospital units. Although the participants in these studies worked on units other than L&D, it is possible that the findings of these studies are applicable to my study results. Thus, I felt that these studies would help to round out themes that may be relevant to my population of interest: that is, pregnant RNs working on obstetrical units (Lawson et al., 2009; Quinn, 2016; Whelan et al., 2007).

Pregnancy and Nursing

To understand the experience of working as a pregnant RN, I retrieved seven articles where the researchers explored the experience of being pregnant while working shiftwork in an acute care hospital as an RN or physician (Davari et al., 2018; Katz, 2012). Five of these articles focused solely on RNs' experiences (Arbour et al., 2010; Lawson et al., 2009; Quinn, 2016; Rita, 2011; Whelan et al., 2007). The themes I identified within these seven articles include (a) the impact of pregnancy on work performance and personal identity, (b) the physical impact of working while pregnant, and (c) subsequent changes in pregnancy outcome.

Impact on Work Performance and Personal Identity

Quinn (2016) conducted a grounded theory study examining the integration of pregnancy in full-time employment as a RN. The researcher's findings suggested that nurses viewed their changing physical appearance and increasing size as a barrier to providing patient care: Their increasing girth limited their ability to maintain physical closeness with their patients. As their pregnancy progressed, the participants explained that they were increasingly unable to perform tasks they were once able to complete, which led them to view their pregnant body negatively. They also became increasingly concerned they would be viewed as incompetent by their co-workers because they needed assistance in completing certain tasks, and often, they did not ask for help, even when it would have been beneficial for personal safety and professional practice. Being labeled as "the pregnant one" became a new identity that separated them from their co-workers. The culture of service in nursing identified by Halperin et al. (2011) could perhaps explain why nurses who are pregnant do not engage in seeking help: There is a level of pride and self-sufficiency evident in nursing practice.

While the participants in Quinn's (2016) study highlighted their inability to perform certain tasks as their pregnancy advanced, they also reported that being pregnant enabled them to bond differently with their patients. Participants explained that patients, especially female patients, bonded more deeply with them as they relayed their own birth experiences and became protective by shielding them from physical injury. Therefore, the work performance of pregnant nurses changed as their interactions with their patients changed due to being visibly pregnant. Last, the participants reported that they were also no longer able to separate professional practice from personal reality, as patients would comment on the extremely personal matter of the nurse's own pregnancy. Quinn suggested that being pregnant changed nursing practice and bonding with patients; however, there is an opportunity to expand knowledge by exploring this from the perspective of a nurse who works on L&D specifically.

Physical Exposure and Pregnancy Outcomes

Exposure to environmental agents (i.e., infectious diseases, anesthetic gases) and their subsequent impact on pregnancy outcomes highlighted the unique occupational risks that affect pregnant nurses (Lawson et al., 2009; Rita, 2011; Whelan et al., 2007). The implications of shift work, long working hours, and ergonomic considerations were also noted in the literature (Davari et al., 2018; Rita, 2011). These unique occupational risks will be explored in this section as they relate to pregnancy and maternal and fetal health.

Environmental Agents. Rita (2011) conducted a literature review into the occupational risks faced by nurses working while pregnant and found that a main risk factor was exposure to infectious agents and anesthetic gases, which may result in pre-term delivery. The exposure to anesthetic agents may occur for L&D nurses during caesarean sections or in post-anesthesia recovery rooms as patients breathe out anesthetic agents (Rita, 2011). Similarly, Lawson et al.

(2009) found that exposure to nitrous oxide and halothane increased the risk of pre-term delivery.

Shift Work and Physical Strain. There was ample research exploring the impact of the physical requirements of working as a pregnant nurse on pregnancy outcome, with a focus on the impact of shift work (i.e., lack of sleep, hormone alteration), long working hours, and ergonomic demands. Indeed, according to Davari et al. (2018), shift work increases the risk of pre-term delivery, with Lawson et al. (2009) suggesting that nurses who work shift work while pregnant are three times more likely to deliver before 32-weeks' gestation. Unfortunately, pre-term delivery is not the only risk pregnant nurses who work shift work face. Whelan et al. (2007) found that nurses who work shift work during pregnancy are at a 60% increased risk for spontaneous abortion or miscarriage. The exact cause for this increased risk is poorly understood and needs further investigation. However, Whelan et al. suggested that hormones during pregnancy and uterine activity are altered during shift work and, therefore, may increase the risk of spontaneous abortion.

Pregnancy Outcomes

In addition to shift work, Katz (2012) and Whelan et al. (2007) found heavy lifting and prolonged standing to be correlated with pre-term birth; this may be due to increased intra-abdominal pressure and compressed pelvic vessels (Lawson et al., 2009). In addition, nurses who are pregnant are at an increased risk for musculoskeletal injury due to high serum levels of progesterone and relaxin in pregnancy (Rita, 2011). This risk is further compounded by nurse's occupational requirement to engage in activities such as bending, heavy lifting, and frequent standing (Rita, 2011). Whelan et al. suggested that to reduce the risk of injury, pregnant nurses need to have reasonable workloads, opportunity to rest, and avoid long periods of standing.

Although Katz (2012), Lawson et al. (2009), and Whelan et al. (2007) suggested many negative maternal/newborn risks may exist from working as a nurse while pregnant, other authors disagreed. Arbour et al.'s (2010) findings suggested that the rate of low-birth-weight infants and infants with congenital anomalies were significantly lower than the general population among infants whose mothers were RNs. Arbour et al. concluded that due to their work in healthcare, nurses may adopt healthier lifestyle habits, thus decreasing the incidents of low-birth-weight infants.

From these studies, it is difficult to say with certainty whether being an RN is beneficial or detrimental to maternal/newborn health, as there was conflicting evidence within the literature. The information was inconsistent regarding how being an RN while pregnant may impact maternal/fetal well-being. However, we do know from Quinn's (2016) study that being pregnant while working as a nurse limits the ability of the nurse to perform certain necessary physical tasks, making the nurse rely more on co-workers to complete patient care. Moreover, the change of nurse–patient relationship when a nurse is pregnant was identified by Quinn, with patients developing deeper relationships with their nurse due to their shared experience of pregnancy. However, this raises important questions as to how personal and professional boundaries are maintained when the nurse herself is pregnant. It would be beneficial to conduct more research into this relationship to understand the meaning of this change from the perspective of the pregnant nurse and the impact on emotional well-being when there is a blurring of boundaries between professional and personal practice due to a nurse's personal pregnancy. I intend to expand knowledge in this area and explore the perspective of this relationship change between pregnant nurse and patient, specifically when the nurse works on L&D in this study.

To mitigate the physical risks of working while pregnant, Whelan et al. (2007) suggested that nurses need to have reasonable workloads and opportunities to rest. In the next section of this literature review, I will explore the culture of L&D nursing/midwifery.

Midwifery and Labour and Delivery Nursing

The articles included in this portion of the review analyzed the culture of L&D nursing and midwifery, although none specifically discussed personal pregnancy for the RN/midwife. By far, the most frequently explored theme I identified in the literature on L&D nursing/midwifery was the psychological impact and occupational stress of being an obstetrical caregiver. Indeed, 16 of the 26 articles included in this review explored this theme. In addition, I also identified the importance of collegial support and debriefing for midwives and RNs who work on L&D units (Elmir et al., 2017; Geraghty et al., 2019; Nash et al., 2018). Organizational issues and professional identity were also discussed, including heavy workload, hierarchal power differences, and lack of autonomy (Cramer & Hunter, 2018; Creedy et al., 2014; Geraghty et al., 2019). Many of these authors also explored the physical demands of working as a midwife or L&D nurse (Elmir et al., 2017; Geraghty et al., 2019; Halperin et al., 2011; Wright et al., 2018). Cumulative emotional, physical, and organizational factors were discussed by some authors as contributing to the issue of high levels of attrition from midwifery and obstetrical nursing practice (Creedy et al., 2014; Elmir et al., 2017; Halperin et al., 2011; Nash et al., 2018).

In this section of this literature review, I will explore the major themes I identified related to midwifery and L&D nursing: psychological impact (with a focus on compassion fatigue) and organizational issues present on L&D units.

Psychological Impact and Occupational Stress

A major theme I identified in this review is the psychological impact of working as a midwife or an L&D RN, which includes subthemes of compassion fatigue, exposure to traumatic births, and the changing view of the birth process (Beck, 2013; Creedy et al., 2014; Elmir et al., 2017; Halperin et al., 2011; Rice & Warland, 2013).

Compassion Fatigue. Interest in the experience of compassion fatigue in obstetrical care continues to grow (Beck et al., 2015). Defined as the "cost of caring" (Figley, 1995, p. 1), compassion fatigue is synonymous with vicarious traumatization and secondary traumatic stress disorder (STS). These interchangeable terms highlight the emotional and physical impact experienced by caregivers, including intrusive imagery, hyperarousal, distressing emotions, cognitive changes, and functional impairment (Bride et al., 2007). STS is "the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person" (Figley, 1995, p. 10). The diagnosis of compassion fatigue is prevalent for healthcare providers who engage in empathetic relationships (Beck, 2011; Beck & Gable, 2012; Figley, 1995), like those relationships that can develop between L&D nurses and their patients (Beck et al., 2015; Halperin et al., 2011; Rice & Warland, 2013).

Experiencing compassion fatigue or STS appears to be prevalent among midwives and nurses: Of the 26 articles included in this review, authors of 10 of these articles discussed compassion fatigue or STS. STS was studied by Beck (2011) in specific areas of nursing, such as forensic, pediatric, emergency, hospice, and oncology nursing. Beck and Gable (2012) and Beck et al. (2015) found that STS was also present for both L&D nurses and midwives, with 35% of L&D nurses experiencing STS (Beck & Gable, 2012), and 29% of nurse-midwives experiencing

severe STS (Beck et al., 2015). Indeed, symptoms described by participants included profound sadness, difficulty sleeping, and recurrent nightmares.

Although Halperin et al. (2011) did not specifically use the term STS, their findings supported the emotional impact of midwifery, as midwives in their study experienced the trio of symptoms of intrusion, arousal, and avoidance. Their participants often retained vivid memories of traumatic events that haunted them for years.

Providing care to patients who experienced multiple complications (i.e., emergency caesarean section and post-partum hemorrhage) and being involved in events that had long-standing implications to maternal or fetal health were viewed as contributing to STS (Sheen et al., 2015). Sheen et al. (2016) concluded that midwives/nurses are particularly vulnerable to trauma if they are newer to the profession, the primary provider of care to the patient, and if they relate to the patient in some regard: for instance, if the midwife/nurse caring for a pregnant patient is also pregnant.

Other authors seemed to concur with Sheen et al.'s (2016) findings. Halperin et al. (2011) suggested that midwives or L&D nurses who are mothers themselves may be more prone to compassion fatigue because they perceive the patient's pain in a more personal way due to their shared connection of being a mother. Indeed, it appears that personal experience and the ability to relate to patients may impact emotional well-being for nurses/midwives (Halperin et al., 2011). Therefore, relating to the patient in some regard, for example being pregnant or a mother, was a shared finding between these two studies.

Nash et al. (2018) suggested that the more experience midwives have, the better they can cope with adverse outcomes, further supporting the work of Sheen et al. (2016). In contrast, Elmir et al. (2017) and Halperin et al. (2011) found nurses and midwives experienced profound

feelings of loss, guilt, and helplessness when adverse events occurred regardless of the length of their work experience. Indeed, Elmir et al. concluded that immediate and long-term emotional, physical, and psychological responses can occur for midwives and nurses after witnessing traumatic events. For example, physiological responses such as shaking, crying, headaches, weakness, pain, heart palpitations, and dizziness can be manifested. During these events, nurses feel that they must suppress their emotions and act in a professional manner to address their patient's needs (Elmir et al., 2017).

Perhaps the reason midwives and L&D nurses suppress their emotions during traumatic times is because of the deep relationship formed between them and their patients (Halperin et al., 2011). Unfortunately, the development of deep connections with patients by midwives and L&D nurses may influence the development of compassion fatigue (Halperin et al., 2011). Indeed, in their quantitative study, Schrøder et al. (2016) found that stronger empathetic relationships were formed between midwives and their patients, in comparison to the obstetrician's relationship with patients. This strong connection to patients may explain why, following a traumatic childbirth, midwife participants in their study scored statistically higher on burnout, sleep disorders, and somatic stress than their obstetrician participants. Moreover, Schrøder et al.'s findings suggested that women may be more vulnerable to trauma than men. Although these findings were specific to midwives, as previously stated, the midwife–patient and nurse–patient relationship was viewed as being similar (Elmir et al., 2017).

These studies highlighted the significance of women witnessing trauma, specifically women who are midwives and L&D RNs and mothers themselves; however, "trauma" is subjective, since different individuals find different events to be traumatic (Rice & Warland, 2013). Unfortunately, although individuals may perceive trauma differently, traumatic events are

likely to be encountered and often are viewed as unavoidable in nursing practice (Cramer & Hunter, 2018). Indeed, Wright et al. (2018) found that 97% of midwife participants in their mixed-methods study had witnessed a traumatic birth, with exposure to traumatic events increasing job attrition. This is relevant, as maternal care is in the midst of a crisis; Employment numbers in midwifery and L&D nursing continue to decrease internationally (Beck et al., 2015; Nash et al., 2018; Wright et al., 2018). By 2030, the World Health Organization (2022) believes there will be a shortage of 9 million nurses/midwives worldwide. It is unclear at this time whether personal pregnancy while working on an L&D unit is a risk factor to mental health and how this may impact the RN's desire to continue working in this area. Without a study into the subjective experience of being pregnant while working on an L&D unit, it is difficult to say what changes should be made in practice.

Thus far, I have explored the events perceived as traumatic by midwives and L&D nurses while working, which may be influenced by personal experiences and relationships; however, it is important to note that the physical and psychological impacts of compassion fatigue reach beyond the workplace. Halperin et al. (2011) found that the trauma experienced by midwives and nurses was not bound by time or space: traumatic events were easily remembered and described in detail and had the power to impact not only their professional lives but their personal lives as well. This was evident as participants discussed their trauma as workplace incidents, and then reflected on how witnessing trauma impacted their family (Halperin et al., 2011). Specifically, many participants described being emotionally damaged by traumatic events and becoming distant with family members (Halperin et al., 2011).

Creedy et al.'s (2014) findings are in support of Halperin et al.'s (2011) findings of the impacts of midwifery work on personal life. In their quantitative study, Creedy et al. found that

midwives experienced 64.9% personal burnout, 48.4% work-related burnout, and 25.6% client-related burnout. Creedy et al. suggested that personal burnout was an indicator of psychological distress, and although they did not directly use the term compassion fatigue, the symptoms of personal burnout (i.e., insomnia, depression, anxiety) in their study are synonymous with those of compassion fatigue (Bride et al., 2007). Moreover, De la Fuente-Solana et al. (2019) also suggested that L&D nurses specifically reflect higher levels of burnout and job dissatisfaction, with 44–56% of nurses who work in L&D experiencing burnout.

In summary, findings from both qualitative and quantitative studies have suggested that compassion fatigue is prevalent among midwives and L&D nurses; however, this concept has not been explicitly explored in relation to pregnant nurses who work in L&D. I intend to address this gap in knowledge in my study. Moreover, the articles by Halperin et al. (2011) and Sheen et al. (2016) discussed that the nurse–patient relationship may be altered by the RN's personal experience, such as being a mother. Therefore, in my study, I wished to expand on their findings and explore how the nurse–patient relationship changes when the nurse is pregnant herself.

The Prevalence of Traumatic Events and the Impact on Perception of Childbirth

Working on an L&D unit may influence how nurses and midwives view the birth process, thus potentially altering their own birth experience. In their mixed-methods study, Beck et al. (2015) suggested that midwives may begin to lose trust in the birth process as they become suspicious and fearful in anticipation that adverse events may occur. Consequently, a process often thought of as beautiful with the bringing forth of new life can also be viewed with an intense sense of fear and impending doom as pregnancy progresses (Beck et al., 2015). Becoming fearful of the birth process may make midwives prone to using interventions in practice and may encourage them to leave the profession altogether (Beck et al., 2015).

Education and reflective practice need to be increased so that the implications of witnessing traumatic births, specifically the early symptoms of STS, are recognized and that appropriate interventions to address mental health sequalae are developed (Beck et al., 2015). While the findings of this study are helpful in understanding midwives' and L&D nurses' experiences of traumatic births, it validated the need for my study, as there is an opportunity to expand knowledge. We currently do not know if these experiences, becoming fearful of childbirth and utilizing more interventions in practice, influence an L&D RN's own birth experience, and if so, in what way.

Collegial Support and Need for Debriefing

I identified the theme of feeling under-supported in the workplace since nurses and midwives have stated more formal debriefing is needed after traumatic events (Elmir et al., 2017; Nash et al., 2018). For example, Beck (2013) suggested that the traumatic experience of a birth involving a shoulder dystocia is strikingly similar between L&D nurses and patients, with one significant difference: Although numerous resources exist for patients, resources for nursing staff after being involved in a traumatic incidence were lacking.

Halperin et al. (2011) reflected that the lack of resources available to L&D nurses and midwives may be due to the culture of these professions. Midwives and L&D nurses have an ethic of service, self-sacrifice, and conformity and rarely acknowledge their need for support. So, while the opportunity to discuss the personal effects of trauma through debriefing is recommended, such opportunities are not often provided for midwives and L&D nurses, compounding their level of vulnerability (Nash et al., 2018).

Although the opportunity to debrief is not often provided, researchers pointed to the value of debriefing (Beck et al., 2015; Schrøder et al., 2016; Wright et al., 2018). Being able to discuss

their feelings may help midwives to feel less culpable and responsible for maternal and fetal demise (Sheen et al., 2016). Midwives who receive support and validation through debriefing from colleagues may feel empowered; the failure or absence of this support may be viewed as having a detrimental effect (Geraghty et al., 2019). A management plan addressing traumatic or stressful events was viewed as beneficial by midwives in providing the opportunity to debrief (Geraghty et al., 2019). However, the current literature does not indicate if pregnant midwives and RNs specifically participated in debriefing sessions and if they believe it is valuable. Therefore, it is difficult to say if pregnant nurses perceive debriefing as being valuable for their well-being.

Organizational Issues: Heavy Workload, Hierarchal Power Differences, Lack of Autonomy

Organizational characteristics that included heavy workload, hierarchal power differences, and lack of autonomy on L&D units were identified as issues in the literature. These had the potential to affect job satisfaction and the emotional well-being of midwives/L&D RNs.

Heavy Workload

In a thematic literature review of working conditions and emotional well-being in midwives, Cramer and Hunter (2018) found that poor staffing practices and increased workload contributed to midwives experiencing high levels of stress, which was correlated with burnout, fatigue, anxiety, hostility, and depression. Moreover, Cramer and Hunter found that heavy workloads impacted the aftermath of traumatic events. The perceived lack of quality care was associated with being overwhelmed, which resulted in perceived compromised patient care. Indeed, midwives and L&D RNs may experience distress because they feel they must be task oriented rather than patient oriented in their care (Creedy et al., 2014; Geraghty et al., 2019; Wright et al., 2018).

Hierarchal Power Differences and Lack of Autonomy

Although midwives and L&D RNs are closely involved in patient care and frequently develop intimate professional relationships with their patients, the ultimate power in the delivery room is often viewed as belonging to the obstetrician (Sheen et al., 2016). This power comes in the form of decision-making when the obstetrician's decision overrides that of the midwife's or nurse's professional judgement, even though their professional judgement is grounded in a holistic assessment of the patient (Sheen et al., 2016). Thus, participants in Sheen et al. (2016) described feeling devalued and powerless when their professional judgment was disregarded. When this happened, their patient's voice was also being silenced since they were trying to advocate for their patients. These findings were supported by Rice and Warland (2013), who found that the barriers between obstetricians and midwives/nurses often led midwives/nurses to feel powerless in advocating for their patients. In both studies, hierarchal power differences resulted in the midwives/nurses feeling distressed. However, Rice and Warland did not provide specific solutions to address this power imbalance.

Pregnant Registered Nurse on L&D

I was able to retrieve only two articles where authors explored being a pregnant RN while working on L&D. I will provide an in-depth critical analysis of these two articles because they are the only two articles I was able to find that directly relate to my population of interest: pregnant nurses working on L&D. The other studies included in this review thus far are not directly related to L&D nurses, and therefore, I provided an overview of these studies and did not do an in-depth analysis of the previous articles because the strengths and weaknesses of the previous studies may not apply to my specific population of interest.

The first article that explored my specific population of being a pregnant RN working on L&D was by Celikkalp and Yorulmaz (2017). The researchers explored being a pregnant RN working on L&D through a prospective repeat study. The aim of their study was to identify the occupational risks of 127 midwives and nurses working on obstetrical units and how these risks impacted the participants' pregnancy and the health of their newborn infants. The researchers used a questionnaire at three different times during the study: twice before the birth of the child and once post-partum to determine the health of the newborn. The questionnaires used for this study were developed by the researchers after a review of relevant literature, and although the authors stated that they found these forms to be effective in gathering data, no validity or reliability measures were discussed as being used by the authors in this study. The sociodemographic forms used during the first two interviews focused on occupational risk during pregnancy, including institutional features. The questionnaire in the post-natal period focused on characteristics of the newborn and the birth experience. The first two questionnaires were completed in person, with the last being completed in person during a hospital visit or over the phone. The final questionnaire was completed 2-weeks post-partum.

The findings from Celikkalp and Yorulmaz's (2017) study were statistically analyzed using a descriptive statistics method and chi-square tests. A total of 71% of the pregnant healthcare workers in this study were nurses, while 28% were midwives. The average age of the group was 30.2 years, which supports the need for my study because as previously stated, those under 35 years of age are of potential childbearing age. The findings indicated that 47% of participants participated in shift work, with 38% of nurses working more than 40 hours per week. The average weekly working hours for midwives and nurses in this study was 48.4 hours.

Of these nurses and midwives, 76% had been assigned night shift (7 pm. until 7 am.) during the first 24 weeks of pregnancy, and 76% worked standing more than 6 hours per day, with the average time spent standing being 6.96 hours (Celikkalp & Yorulmaz, 2017). This finding is significant, as it demonstrates the prevalence of working shift work for L&D nurses who are pregnant. As previously discussed, shift work is viewed as a risk factor for pre-term delivery (Lawson et al., 2009), and therefore, it is important to note that the specific population I studied, pregnant L&D nurses, do partake in shift work during pregnancy.

Moreover, Celikkalp and Yorulmaz (2017) also found that 88% of participants did not believe their work environment was safe. Of these participants, 89% stated that they were exposed to occupational risks within their working environment, including biological agents and heavy lifting. Indeed, 52% of their participants stated that they believed their work environment would negatively affect their pregnancy and the health of their newborn. From these findings, one can infer that the nurses who were working while pregnant on L&D experienced high levels of stress, as they were forced to balance their professional duties and the well-being of themselves and their developing infant. This is significant, as stress during pregnancy is correlated with experiencing post-partum depression in the post-natal period, further negatively impacting maternal and fetal health (Brummelte & Galea, 2010).

Celikkalp and Yorulmaz (2017) concluded that fearing for their health was a valid concern, as 65% of participants developed at least one pregnancy complication, including post-partum hemorrhage, preeclampsia, and gestational diabetes. This finding depicts the personal risk that L&D nurses may encounter due to being employed in this area. It would be beneficial to understand what factors nurses viewed as being supportive to their physical well-being during pregnancy while working on L&D. At this time, we do not understand what tasks L&D nurses

view as most difficult in performing while pregnant, and my intent was to explore this in my study.

Although complications can occur in any pregnancy, statistically significant results were found in relation to spontaneous abortion for those who primarily worked standing up ($p > 0.05$). The risk for spontaneous abortion was significantly higher for participants in Celikkalp and Yorulmaz's (2017) study compared to the general population, with 19% of participants who worked more than 40 hours per week and 18% who worked night shift experiencing a spontaneous abortion, thus demonstrating the impact of this professional occupation on personal life. In addition, the researchers found a particularly significant connection between exposure to anesthetic gases and the birth of a low-birth-weight infant ($p = 0.011$). Although not all nurses who work on L&D assist with caesarean sections (Murray & Huelsmann, 2020), and are therefore potentially exposed to anesthetic gases, it is important to recognize that a risk is present for those who do. Celikkalp and Yorulmaz's research suggested that there may be a physical risk to nurses who work while pregnant on L&D units, as the outcome of low-birth-weight infants, spontaneous abortion, and pregnancy complications were prevalent.

How these complications are internalized by the pregnant nurse was missing from Celikkalp and Yorulmaz's (2017) study, and therefore, it is difficult to assess how each participant felt when they experienced complications and if their prior nursing/midwifery knowledge impacted the choices they made in relation to their personal pregnancy. Lastly, another factor that limits how applicable this study is to Canadian nurses is the location of the study. This study was conducted in Turkey, where the maternal mortality rate is 17 deaths per 100,000 live births in 2017 (World Data Atlas, 2017), whereas in Canada, the maternal mortality rate is only 8.3 deaths per 100,000 live births (Statistics Canada, 2019). Therefore, the findings

from this study may not be generalizable to the Canadian context, as the healthcare system and working conditions may not be similar for Canadian L&D nurses and labour when compared to delivery nurses working in Turkey. Therefore, a gap exists in addressing the experience of pregnant RNs working on an L&D unit in Canada.

The second article I retrieved was written by Watson et al. (2016). These researchers conducted a quantitative study, with the aim of determining if the workload of obstetrical nurses was associated with negative pregnancy outcomes, including pre-term delivery and low birth weight infants. The authors developed a survey of 32 questions that included multiple-choice, yes/no, and open-ended questions to gather information about L&D nurses' and post-partum nurses' pregnancies, including physical demands and related outcomes. This survey was developed from a review of current literature. Input from several obstetrical nurses who worked in the authors' workplace and who left work earlier than intended during their personal pregnancy also informed the development of survey questions. To test the reliability of this survey, Watson et al. conducted a pilot run of the survey with six obstetrical nurses who worked during one or more of their pregnancies. No changes were made to the piloted survey based on the nurses' responses or feedback to the survey design.

Although surveys are a useful way to gather information from large populations, this method of data generation does not promote open-ended communication and the subjective understanding that can occur with in-depth interviews (Sandelowski, 2000). Therefore, I used in-depth semi-structured interviews as a different method of data generation to expand knowledge in this area of inquiry.

Ninety-five surveys were collected from primiparous and multiparous women for a representation of 120 singleton pregnancies. Individuals included in the analysis were nurses

who were working in a position on L&D/post-partum. It is important to note that Watson et al. (2016) did not specify whether casually employed nurses were eligible for this study. The findings of this study found that 53% of L&D nurses are exposed to workplace stress during pregnancy and that workplace stress did not differ between part-time and full-time employed nurses. This finding is relevant, as it depicted that the majority of nurses who work while pregnant on L&D experience stress, regardless of hours worked. Moreover, it is a strength of Watson et al.'s study that it measured perceived stress, as stress is frequently correlated with adverse birth outcomes (Katz, 2012; Lawson et al., 2019). Indeed, research by Wisborg et al (2008) found that women who experienced high levels of stress in their pregnancy had an 80% increased risk of stillbirth. As previously stated in this review, what is perceived as traumatic or stressful is subjective to the individual (Rice & Warland, 2013). Therefore, I wished to expand on these findings in my study and understand if stress is an issue that my participants identify with and further explore from a subjective perspective what factors they viewed as stressful during their personal pregnancy while working on L&D.

Work-place stress was not the only issue identified, as many of the nurses in Watson et al.'s (2016) study did indeed experience pregnancy complications, with over one-third reporting pre-term labour, antepartum hemorrhage, and preeclampsia. Infants born to mothers who experienced complications weighed on average 441 grams less than those without complications.

This impact on infant weight is significant, specifically due to the difference in newborn weight between mothers who worked part-time and those who worked full-time. In Watson et al.'s (2016) study, part-time work was defined as anything less than full-time hours. Infants born to mothers who worked full-time weighed on average 300 grams less than those born to nurses working part-time. Therefore, although experiencing workplace stress may not be different

between those who worked full-time and those who worked part-time, the impact on fetal weight was different between these two groups (Watson et al., 2016). However, it is important to note that babies born to these nurses did not meet the accepted low-birth-weight criteria of less than 2,500 grams. The findings did not show any difference in birth weight for infants born to RNs who worked full-time 12-hour shifts in comparison to those who worked 8-hour shifts, thus Watson et al. concluded that it was not the number of hours worked in a shift that impacted birth weight but the cumulative hours worked with night shift being included. Due to the birthweight differences between mothers who worked full-time and those who worked part-time, I incorporated into my study a question that assessed the average number of hours worked by my participants while pregnant. By doing this, I was able to explore if the subjective experience of being pregnant while working in L&D is impacted by number of hours spent working during pregnancy.

A strength of Watson et al.'s (2016) study is that the authors situated their findings of pre-term birth rates (12.9% of participants) within the context of Canada by providing the pre-term birth rate of Canada (7.8%). By providing the context of pre-term delivery in Canada, the findings highlighted that perhaps the rate of pre-term delivery in L&D nurses needs more investigation, as the numbers are slightly higher than in the average population, thus validating the need for my study and more exploration into this population. Watson et al. stated they do not have an explanation for this increased rate.

The findings of Watson et al.'s (2016) study highlighted the significant impact of working full-time on L&D/post-partum on infant weight and the increased rate of pre-term delivery experienced by participants in their study in comparison to the Canadian average. As their study was conducted in Ontario, Canada, these findings may be transferable to my

population. Moreover, by using a survey, participants were limited to responding to the questions they were asked online and did not get the opportunity to have an open discussion about their experience with a researcher. Thus, the subjective experience of these participants remains unknown. My intent was to explore this through prompting reflection of their experiences with each participant in my qualitative descriptive study.

Summary of Review of Literature

To summarize the findings of this review, my search yielded 26 articles that included three mixed-method studies, 12 qualitative studies, and 11 quantitative studies. The authors of seven of these articles explored being a physician/RN/midwife and working during pregnancy. In 18 articles, the researchers explored the culture of L&D nursing/midwifery. Only two articles, both quantitative, were retrieved where the authors specifically explored the population of being a pregnant RN working on L&D.

The findings included in this review support that nursing during pregnancy impacts work performance and identity (Quinn, 2016), and the physical requirements of working as an RN while pregnant may potentially impact a developing infant as well as maternal health (Lawson et al., 2009; Rita, 2011; Whelan et al., 2007). However, Arbour et al. (2010) found that low-birth-weight infants and congenital anomalies were lower amongst infants born to RNs; therefore, whether or not working while pregnant as an RN during pregnancy may negatively impact maternal/fetal health is inconclusive at this time.

Other major themes identified in this review were the implications on the mental health of midwives and L&D RNs working on L&D units, specifically related to compassion fatigue and an altering view of the birth process. In addition, organizational issues were identified as contributing to or hindering the emotional well-being of midwives and L&D RNs, including

heavy workload, hierarchal power differences, and lack of autonomy (Cramer & Hunter, 2018; Creedy et al., 2014; Geraghty et al., 2019). The physical well-being of midwives and L&D nurses was also frequently explored. Researchers suggested that midwives and L&D nurses engage in physical activities like bending, lifting, and prolonged standing that negatively impacted their overall health (Cramer & Hunter, 2018). These findings cumulatively supported that more research is needed into supporting midwives/L&D nurses who are pregnant, as they are prone to experiencing trauma, are hindered in their performance by organizational issues, and are likely to engage in physically demanding tasks. More research is needed to understand how these factors impact maternal and fetal well-being from the perspective of the pregnant RN.

What we do know about being pregnant while working on L&D was explored by Celikkalp and Yorulmaz (2017) and Watson et al. (2016). These authors explored the physical requirements of nursing and the negative impact on maternal health for pregnant nurses working on L&D and examined the implications of this negative impact on fetal well-being. However, both studies used a quantitative approach through the use of questionaries/surveys to collect data and lacked the subjective voice of the participants. It is also difficult to say if the context in Celikkalp and Yorulmaz's study has provided findings applicable to Canadian nurses. Moreover, Watson et al. acknowledged the gap that exists in their research, as factors that aided the RNs' well-being while being pregnant and working on L&D were not explored.

By acknowledging the gap of a lack of focus on pregnant RNs working on L&D that exists in the current literature, I framed my study in such a way as to explore the experience of working on an L&D unit while pregnant from the perspective of the nurses themselves. My intent was to explore factors RNs described as either supportive or detrimental to their physical and emotional well-being while working on L&D, thereby addressing the gap that currently

exists. In the next section of this thesis, I will outline my research methodology to address this gap: specifically, my philosophical orientation, method, data generation, data analysis, ethical considerations, and dissemination techniques.

Chapter Three: Research Methodology

The research method I used to explore the experience of being a pregnant registered nurse (RN) working on a labour and delivery (L&D) unit is outlined in this chapter. I will discuss my philosophical orientation, research design, sample and recruitment, ethical considerations, data generation, data analysis, rigour and trustworthiness, study limitations, and my plans for disseminating the findings and recommendations arising from this research.

Philosophical Orientation

Qualitative descriptive research is in alignment with the general tenets of naturalistic inquiry (Sandelowski, 2000). Within the naturalistic approach to inquiry, multiple realities exist and are constructed based on the subjective experience of each individual as they describe their own interpretation of a phenomenon (Lincoln & Guba, 1985). Knowledge is a co-construction between researcher and participant, with the researcher aiming to gather a deep understanding of a social phenomenon within a specific context (Lincoln & Guba, 1985). Where objectivity is the goal of traditional quantitative research, naturalistic inquiry argues that in studying human interactions and experiences, a researcher must acknowledge their own position and contribution to the evolving data (Sandelowski, 2000). I conducted this research using a naturalistic approach to inquiry, and through this approach, I explored the experiences of working as an L&D nurse while pregnant.

A naturalistic approach to inquiry is in alignment with my personal belief system, as I believe that realities are constructed based on individual experience and interpretation. This paradigm is congruent with a qualitative descriptive method since participants can explore their personal experiences of a topic with the researcher. Through participant-led exploration and co-construction of knowledge, the researcher gains a deeper understanding of the phenomenon

(Sandelowski, 2000). Through the analysis process, I reflected on the interviews and data to generate themes that represented the experience of being pregnant while working on L&D units by using the participants' verbatim phrases (Braun & Clarke, 2006). Through our discussions, the participants and I explored the participants' reality of what it was like to be pregnant while working on L&D. During these conversations and after as I continued my analysis, I compared their unique reality to the pre-conceived notions I had based on my work and personal experience on an L&D unit. Although I have not been pregnant while working as a nurse on L&D, through our discussions, the participants and I were able to reach a new, collective understanding, as we co-constructed knowledge of this experience.

Research related to the experience of working on an L&D unit is supportive of a naturalistic approach. In midwifery and L&D nursing, the formation of a deep connection and relationship between patient and provider is often viewed as essential to care (Halperin et al., 2011). Because of the strength and depth of this relationship, the concept of mutuality, which refers to the shared interaction between individuals, is discussed in research relating to L&D nursing (Halperin et al., 2011; Schrøder et al., 2016). To link the concept of mutuality to a naturalist paradigm and this research study, the concept of mutuality refers to the creation of a new understanding or knowledge that is formed from a relationship between two individuals. It is the formation of this relationship that leads to a deep connection and understanding of an experience. Thus, through mutuality, the concept of co-construction of knowledge between two individuals and the belief that multiple, subjective realities exist, my approach was in alignment with a constructivist approach (Carter & Goodacre, 2012).

The ontological and epistemological position of naturalistic inquiry is evident within research related to midwifery and L&D nursing and is in alignment with my personal belief

system. Therefore, using a naturalistic approach to inquiry was well-suited for a qualitative descriptive study of pregnant RNs working on L&D. The voice of pregnant nurses who are working on L&D is lacking in the current body of literature, and through my naturalist approach to inquiry, I have begun to address this gap and highlight areas that require future inquiry.

Biases

As a co-contributor to data generation, it was important that I acknowledged my personal biases (Lincoln & Guba, 1985). I was drawn to this research topic, as I am a female, of childbearing age, who is currently employed as an RN on an acute L&D unit. My pursuit into understanding the topic of being pregnant while working on an L&D unit was born out of my desire to understand how I might prepare myself for my own labour and childbirth experience, when I carry with me the knowledge of traumatic births as well as the beautiful miracle of childbirth. I acknowledge the bias that I carry of knowing that bad outcomes can occur, and I often think of this before acknowledging that there are numerous positive, happy outcomes.

My experience is also coloured by the stories my co-workers have shared with me about their own birth stories and how their nursing knowledge might have impacted their experience. For example, some of my co-workers have stated they chose a caesarean-section (CS) over a forceps-assisted delivery, because if forceps fail, an emergency CS is inevitable. RNs who work in this area have the unique knowledge of understanding how an emergency CS may impact them and their baby, as often an emergency CS requires general sedation rather than regional anesthetic (Bloom et al., 2005). General sedation anecdotally increases chances of an infant being admitted to the neonatal intensive care unit; moreover, with general sedation, it is hospital policy that a patient's partner is not allowed to be in the operating room. Thus, if forceps fail and an emergency CS is needed, the patient's partner is excluded from the delivery experience. With

a planned CS, a regional anesthetic is often used (Bloom et al., 2005), and therefore, partners can be present for the delivery, and the patient is able to stay awake during the operation. As my co-workers have shared these stories with me, I have heard their voices change as their nursing knowledge comes forward when they discuss potential outcomes. It is through these conversations that I became interested in the topic of what it was like to be pregnant while working as a nurse in L&D, as it appeared to me that nursing knowledge may have an impact on a nurse's personal birth experience. However, no research has been published on this subjective experience, and thus, a research study exploring this phenomenon was needed.

Although L&D units are generally regarded as a *happy place* to work among members of society, they are also filled with grief, heartache, and loss. In a quantitative study, 31% of midwives indicated that they had lost trust in the natural birth process and that through their practice, they also "lost [their] innocence in the birth process" (Beck et al., 2015, p. 21). I too have lost my innocence; I have held the hands of mothers as they say goodbye to their babies too soon. I acknowledge that I brought this knowledge into each interaction I shared with my participants, and I was open with my participants about my knowledge and personal experiences prior to beginning interviews. In addition, I practiced reflexivity through journaling, with the goal of continuing to become aware of my personal beliefs and biases regarding childbirth and their implications on the research process (Doody & Noonan, 2016). Specifically, I reflected and analyzed how my biases influenced the questions I asked each participant, how I interpreted their responses, and how my beliefs impacted my analysis process. It is through this reflexive practice that I believe I was able to capture each participant's subjective experience of working while pregnant on an L&D unit and display findings that are an accurate description of this experience.

Research Design

As there was a lack of qualitative research exploring the experience of being a pregnant RN working on L&D, an exploratory qualitative descriptive design was appropriate (Sandelowski, 2000). A qualitative approach seeks to answer the *what, how,* and *why* of a phenomenon, rather than the *how many* or *how much*, which are answered by quantitative methods (Bricki & Green, 2007). The research methodology of qualitative description has been utilized more frequently in recent years in midwifery and nursing research (Bradshaw et al., 2017), as it is an ideal research method when the goal is to explore the first-person account of a phenomenon (Nash et al., 2018). A qualitative descriptive design entails the presentation of an experience in everyday language, and unlike phenomenological, ethnographic, or narrative descriptions, there is no requirement for analysis of the findings from a specific theoretical or philosophical perspective (Sandelowski, 2000). The aim of choosing this method was to bring forward the participants' experiences through a thick description of their experiences while staying close to the verbatim data (Sandelowski, 2000). By using a qualitative descriptive design, I was able to explore the participants' experiences of working as a nurse on L&D while pregnant and how they believed their area of practice influenced their birth story and outcome.

Sample and Recruitment

Sampling in qualitative descriptive studies is done with the aim of capturing rich qualitative data with sample sizes ranging from one to 30 participants (Bengtsson, 2016). Thorne et al. (2016) stated that expanding the sample size is not a qualitative researcher's goal, but rather, to have a sample large enough to generate thick descriptions. In certain instances, a single case may illuminate the substance of an experience (Thorne et al., 2016). Thus, it is quality not quantity of data that a researcher seeks. In my literature review, sample sizes used in qualitative

research ranged from six to 21 participants, with the average sample size for the qualitative descriptive studies in my review being nine participants (Halperin et al., 2011; Nash et al., 2018). Using this as a guide, I was able to recruit nine participants for this study.

Inclusion and Exclusion Criteria

To be eligible for this study, participants must have met these criteria:

1. Worked on an L&D unit in an urban or rural location in Southern Alberta. I recruited individuals from one urban centre and one rural centre. The rural centre provides services to women who are considered to have low-risk pregnancies and had 129 deliveries in 2020. This exposure to deliveries was consistent with other qualitative L&D nursing research (Beck & Gable 2012; Lake et al., 2019). By including rural nurses in this study, I achieved greater variation in my sampling (Bricki & Green, 2007), which enhanced the richness of the data generated. An example of a potential difference that I thought may impact findings is that in rural centres, personal and professional relations are often intertwined due to closeness of community members (Hunsberger et al., 2009). Moreover, rural sites often have limited staffing and limited resources, which may alter the experience of being pregnant while working in L&D (Hunsberger et al., 2009). Indeed, both closeness of the community and limited staffing and resources were brought forward in multiple interviews by rural participants. Although knowing patients personally and professionally is common for rural nurses, the urban centre utilized in this study was small, and therefore, participants in this study from the urban centre also described having personal relationships with people they cared for.

2. Must have worked as an L&D nurse for one year prior to the birth of their first child. This is consistent with the literature pertaining to obstetrical knowledge and the accumulation of childbirth experiences with research showing that nurses experience increased levels of confidence in their skills after one year of L&D employment (Elmir et al., 2017; Halperin et al., 2011). In addition, it ensured that the participant became pregnant with their first child while employed on this unit allowing for all stages of pregnancy to be experienced while working on L&D.
3. Must have been under the age of 35 when they gave birth. After age 35, pregnancy complications increase, including the risk of spontaneous abortion and decreased fertility (Laopaiboon et al., 2014). Using this age limit decreased the chances of a woman experiencing complications in pregnancy and childbirth that are potentially age related and that may have altered her experience of being pregnant while working. In Alberta, Canada, 34.9% of nurses are below the age of 35 years of age (Canadian Institute for Health Information, 2019); hence, I was able to recruit enough individuals within this age limit.
4. Must have given birth to their first child within last 10 years and most recent child within the last 5 years. This criterion was supported by research that demonstrated that memories of childbirth can be accurate up to 20 years post-partum but have a higher level of accuracy within 5 years post-partum (Simkin, 1992; Takehara et al., 2014). Gameiro et al. (2009) suggested that primiparous mothers may have a more difficult time adjusting emotionally after childbirth than multiparous women. However, my study was not limited to primiparous mothers. Due to my personal connections at both the urban and rural locations, I believed that if I had limited this

study to primiparous mothers, I would not have been able to recruit enough individuals to support the generation of thick descriptions. Therefore, when I recruited participants, I included both primiparous and multiparous women, if the multiparous women had their first child within 10 years of recruitment date. I acknowledged that differences existed in experiences for a woman who has had more than one child, and therefore, I created two interview guides: one for primiparous mothers (Appendix A) and one for multiparous mothers (Appendix B). By doing this, I believe the uniqueness of each participant's story was able to be fully explored, as multiparous women discussed how having multiple children impacted their experience of working in L&D with each pregnancy. I believe this variation in sampling provided the opportunity to hear multiple perspectives and, therefore, helped me to develop a deeper understanding of the experience of working as a nurse on L&D while pregnant.

5. Participants were only included in this study if they had given birth to a full-term infant.
6. Participants must have been able to read, write, and speak English fluently

Exclusion criteria included the following:

1. Participants were excluded from this study if they began their maternity leave early due to the COVID 19 outbreak, as this might have altered their experience and could have produced findings that are not representative of the phenomenon.
2. Participants were excluded if they had not had a term delivery of an infant whose gestation was greater than 37 weeks, as prior to this gestation, the infant is considered a pre-term delivery (Howland, 2007). Having a pre-term delivery is associated with

increased neonatal health risks, which can alter the stress on the family and the coping abilities of new mothers (Howland, 2007).

Recruitment Strategies

Once I received ethics approval from the University of Alberta and organizational approval from Alberta Health Services, I commenced the recruitment of participants and data collection. This study adhered to the requirements of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans National Standards* (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada [Tri-Council], 2014).

I used a purposive sampling technique to recruit participants from the urban centre for this study. This sampling strategy is consistent with my philosophical orientation and a qualitative descriptive approach, as it allowed recruitment of participants who had an in-depth, personal understanding of the phenomenon (Gray, 2018). By selecting individuals who have lived the experience, the participants can provide insights that allow for a thick description of the phenomenon (Sandelowski, 2000). Convenience sampling was also utilized at the urban centre. Convenience sampling allows a researcher to select participants who are readily accessible or available who meet the inclusion criteria (Bradshaw et al., 2017). I had access to participants because of my role as a fellow L&D RN. Often in qualitative research, it is difficult to establish trust and gain access to a community; however, I had the benefit of conducting backyard research due to my employment on this unit, as I used my personal connections to network and recruit individuals. Trust and the development of relationship aids in the generation of rich, meaningful data, and I view this as a strength of this study and recruitment strategy (Sandelowski, 1995). However, there are limitations and specific ethical considerations that are

necessary to consider when conducting backyard research. This will be discussed in the ethical considerations portion of this chapter. Although I view having a trusting relationship with participants from the urban centre as a strength, some may suggest that it creates an experience that is very homogenous, which would be a limitation. To address this, I also recruited from a rural location.

To recruit from the rural location, snowball sampling and purposive sampling were used. By using these approaches, I gained access to individuals who had experienced the phenomenon of interest and who were able to recommend other individuals who further contributed to the study (Edwards 2015). For this study, I entered this centre using connections through my personal practice at the urban centre. I have oriented multiple nurses from the rural location to L&D nursing at the urban centre, as the urban centre has more frequent births and, therefore, provides more learning opportunities for rural nurses who are orientating to obstetrical practice. Through utilizing these connections, I gained access to L&D nurses who have been pregnant and returned to practice at the rural site.

I also contacted the managers of the L&D units at the urban centre (Appendix C) and the rural site (Appendix D) via email to discuss the purpose and scope of my proposed study. After this initial email, I provided a letter to the managers detailing the information that I distributed to RNs working at each site (Appendix E). During each meeting with the managers, I assessed for any concern they had regarding the organizational impact of my study, although no concerns were noted. Once I received operational approval from Alberta Health Services and ethics approval, I asked an administrative staff member at each site to send the letter of invitation to RNs working on L&D on my behalf, which had been previously discussed with the managers (Appendix E). Having an administrative staff forward the email on my behalf to the RNs was

done with the intent to avoid the perception of coercion from the managers for nurses to participate in the study or from me as a co-worker. I was able to recruit participants through eye-catching advertising using a poster (Appendix F; see also Braun & Clarke, 2006), which I posted in the staff locker room and break room at each site with the manager's permission. On this advertisement poster, tabs with my contact information were available that individuals removed. However, I was concerned that individuals might not feel comfortable taking a contact slip, so I attached a barcode on the poster that individuals were able to scan to retrieve my contact information.

The advertisement poster I created was also shared on the L&D United Nurses of Alberta Facebook page, which was created by the urban location. This Facebook page includes every individual who works at the urban location, and it is collectively managed by all nurses working on L&D at the urban location. Therefore, it was an appropriate place to share information, as all individuals had equal access to the information, and I did not selectively target any individuals.

To further encourage individuals to participate in my study, I asked the manager at the urban location if I could attend their monthly unit meeting. The aim of attending this meeting was to present the purpose and scope of my study to my peers. I believe this approach worked well, as two participants consented to participate in my study after this meeting. I asked the manager at the rural centre if they also have meetings like this; unfortunately, no meetings were held during the time I was recruiting.

Snowball sampling was used as another sampling strategy since it is a useful method used by researchers to gain access to desired participants (Edwards & Holland, 2013). Thus, I asked individuals who were present during the meeting at the urban centre if they would be willing to invite co-workers who were not present to participate in the study. To that end, I provided

business cards (Appendix G) with my information to facilitate participation. Individuals were informed that there was no requirement for them to refer individuals to my study and that doing so was at their own discretion. When I had a participant agree to participate in my study from the rural centre, I utilized snowball sampling and asked if she would refer anyone to my study, again, at her own discretion. Through snowball sampling, I was able to recruit three out of the nine participants for this study. The other recruitment strategies described earlier supported the recruitment of the other six participants.

When individuals contacted me by email or phone, I screened them to see if they met the inclusion requirements to participate in this study. If they did not meet the inclusion criteria, I kindly informed them of this and thanked them for their offer to participate. I asked these individuals to refer anyone else to contact me if they believed they met the inclusion requirements. Once individuals were screened and deemed eligible to participate, I requested participants to share their phone number and email address with me. I stored this information separately in a password-protected personal computer. Last, I explained the research intent and objectives prior to scheduling the interview date and time, which was mutually agreed upon with each participant.

Using these recruitment strategies, I was able to recruit nine participants. The participants provided not only extensive descriptions of their experiences, but they also shared their feelings and perceptions during the interview. When I asked for clarification or used prompts, participants appeared to pause to reflect on their response, which then produced thoughtful insights resulting in thick descriptions.

Ethical Considerations

Using the Tri-Council's (2014) *Tri-Council Policy Statement*, ethical considerations specific to my proposed study included attaining informed consent, mitigating risks to participants' welfare, remaining aware of the distribution of power between the participants and me, and protecting participant confidentiality throughout the research study. The research ethic guidelines presented by the University of Alberta (2018) were also followed throughout the research process. I will present how I upheld these ethical considerations through detailing the subtopics of informed consent, benefits and harm, and privacy and confidentiality.

Informed Consent

To facilitate informed consent, I provided complete information pertaining to the different aspects of the research study and obtained consent from each participant prior to participation in the study. The consent form (Appendix H) outlined the purpose and intent of the study including research methods, risks, benefits of participating in the study, as well as potential dissemination techniques. I provided my contact information as well as my supervisor's information on the consent form in case participants required more information. In addition, I included an opportunity for participants to receive a report of the summary of my findings if they wished. No participants expressed interest in receiving this report.

As discussed in my recruitment strategy, when participants expressed interest in my study, I asked them to share their contact information with me, including a preferred email address and phone number. By obtaining an email address, I sent them the consent form from my university email address so that they could review it prior to our interview meeting. Due to the COVID-19 pandemic, interviews were conducted via videoconferencing. If the interview was scheduled at a date greater in advance than one week from the time of the actual interview, I sent

the consent form one week prior to our interview. If the interview was scheduled in less than one week, I sent the consent form right after the interview date was set with the participant. By sending the consent form to each participant prior to the date of the interview, the participant was provided with time to make the decision to participate in the study after reading the consent form or to retract their offer prior to the interview date (Doody & Noonan, 2016). To ensure that each participant received this e-mail, I asked for a confirmation e-mail in reply.

Written consent was obtained from each participant prior to the interview. Because the interviews were completed virtually, participants printed the consent form, signed it, scanned it, and then emailed it back to my university of Lethbridge email prior to each interview. Once written consent was attained, I continued to assess consent during each interaction, with reminders that involvement in the study was completely voluntary and that no penalties or harm would come to the participant if she decided to withdraw for any reason. I acknowledged the intimacy of interviewing participants that I work with, such as fear of harm to our personal relationship. Therefore, I explicitly discussed this with each participant and voiced that our personal relationship would not be impacted if she decided to withdraw from this study. No participants decided to withdraw from this study. In addition, during data generation, if a participant did not wish to answer a specific question, she was informed that she had the right to not provide a response; however, no participants objected to any questions during the interviews.

Benefits and Harms

It is important to acknowledge that qualitative in-depth interviews have the potential to evoke unanticipated feelings and emotion (Doody & Noonan, 2016). To uphold the principles of concern for the welfare and protection of all participants from potential harm because of participation in the study, I discussed the risks and benefits with the participants and clarified

their concerns prior to each interview (Tri-Council, 2014). This is in alignment with the ethical principle of non-maleficence, as I acknowledged the psychological consequences, such as the ramifications of bringing forward traumatic or difficult memories that could occur for participants during this study (Doody & Noonan, 2016). I also mitigated any potential risks by having a referral form ready for distribution for mental health services. No participants in this study expressed concerns for their well-being; therefore, the form was not distributed. I discussed with participants the potential that they might share thoughts or feelings they had kept private or not had expected to share during the consent process, and again, I reminded them that what they shared was their choice. Three participants did become tearful, and I offered to take a break during the interview; however, no participants stated they needed a break. Two participants shared that they found it cathartic to share their experiences.

Another measure I took to protect participants from undue harm was to include concluding statements in my interview guide. This allowed me to naturally conclude our discussion by ensuring that participants were able to fully explore sensitive subjects, while ending the interview on a lighter note of conversation. An example of these statements is available in the sample script I have created (Appendix I). By doing this, I believe the participants were able to achieve closure and end our conversation on a positive note.

The power of qualitative descriptive studies is that it allows participants to share their stories in their own words and, through this, reflect on their personal experiences (Gray, 2018). Although I stressed during our interactions that my role was that of a researcher, and not as a mental health practitioner or friend, I believe the participants did benefit from sharing and reflecting on their experiences. As described, two participants verbally expressed this to me. In

addition, by participating in this research, three participants shared their appreciation for having the opportunity to add to the current knowledge pertaining to this topic.

Glesne (1999) cautioned that "when others trust you, you invariably receive the privilege and burden of learning things that are problematic at best and dangerous at worst" (p. 119). Trust is an important factor I have considered due to conducting research in my own workplace. The benefits of conducting research in one's own place of employment is evident, as Aarnikoivu (2016) stated that researchers do not need to participate in the time-consuming process of building rapport and trust, thus allowing for deeper exploration of the research topic. However, Malone (2003, p. 799) warned of the danger of researchers being naïve in their approach to research in their own "home." She argued that although the word home generally represents safety and trust, conducting research in your own workplace requires more thought into institutional power dynamics and the vulnerability of participants. She advised that to mitigate this power dynamic, the researcher must evaluate any influence they may have over participants.

Due to my relatively new employment on this unit (I have worked on L&D for four years) and my lack of seniority as an RN (I have been an RN for five years), I am considered a junior employee on my unit by my co-workers, with the majority of my co-workers having 10 years of experience or more. Because of this, I believe I had limited power over my participants from an institutional standpoint. Moreover, by expanding my recruitment to include individuals from a rural location, I explored this experience from the perspective of nurses with whom I was not a co-worker. Utilizing this other site helped me limit my personal bias, as I did not have close connections with these participants. During my analysis process, I engaged in reflexive practice when analyzing all transcripts, and I noted that my interviewing style did remain consistent between participants at both sites.

It is important to note the ethical responsibility that I have as a nurse researcher. According to the College and Association of Registered Nurses of Alberta (CARNA; 2010), nurses are accountable to both themselves as professionals as well as to the public. Therefore, a RN must raise awareness of ethical issues present in the workplace and utilize the necessary resources to report any unethical behaviours witnessed or discussed. This is in alignment with the CARNA nursing practice standard 3.6: "The nurse follows ethical practice when engaged in any aspect of the research process" (CARNA, 2013, p. 6). I shared this ethical responsibility with each participant before initiating each interview, therefore allowing the participants the choice of what they felt comfortable sharing with me, with the knowledge that I had a professional responsibility of reporting any unethical behaviour to CARNA. No unethical behaviour was observed throughout the interview process.

In addition, Malone (2003) posited that member checking is a validation strategy that should be utilized to ensure participants are not exploited. I used this strategy in my research study with two participants. This validation strategy will be explored in more depth in the Rigor and Trustworthiness section of this chapter. Lastly, I continued to be cognizant throughout this study of the implications of conducting research within my own workplace by consistently reflecting on any positive or negative outcomes from our discussion. For example, I discussed with participants prior to the beginning of the interviews that anything shared during their interviews would not affect our relationship as co-workers. By doing this, I believe I limited any harm to my participants and maintained the participants' trust.

Privacy and Confidentiality

The researcher is responsible for guaranteeing confidentiality of participants and their data (Doody & Noonan, 2016) by protecting the privacy of personal information disclosed in a

confidential relationship (Beauchamp & Childress, 2001). It is my duty as a researcher to maintain participant confidentiality, and I did this by ensuring that personal information obtained did not lead to identification of participants. Specific measures taken to protect my participants' identity will be discussed in further detail later in this section.

By using qualitative interviews as a data generation method, the responses to questions cannot always be anticipated (Doody & Noonan, 2016). Therefore, participants might reveal intimate and personal details they might not have anticipated sharing. I provided reassurance to my participants that if there was any information they wished to be excluded from their transcript, they could contact me, and I would exclude those excerpts; however, no participants chose to do so. It is often intimate comments that provide rich insight into the experience (Sandelowski, 2000), and I verbalized to each participant the value of their candid reflection of their experiences by stating that it was their story I wanted to hear, while reassuring them that there were no *right* answers to questions asked.

I worked to the best of my ability to maintain confidentiality and anonymity of my participants and their story. I employed several strategies to support their confidentiality and anonymity. First, I conducted the videoconferencing interviews in a quiet, private room in my own home when I was alone, limiting the opportunity that those I live with would hear our private conversation (DeJonckheere & Vaughn, 2019). I recommended to each participant that it would be ideal if she could schedule the interview during a time when she would also be alone.

Secondly, I asked each participant to choose a pseudonym she would be referred to throughout the research study. All data used the pseudonym chosen by the participant, and this was stated in the consent form (Appendix H). In addition, because this study was conducted partially in my own workplace, to maintain confidentiality, I removed individual expressions or

language nuances to protect my participants' identities when using direct quotes (Doody & Noonan, 2016). For example, if participants were recruited from the urban site I work at and said "our unit" this was changed to "the unit." I was cognizant of maintaining confidentiality in all stages of transcribing and analysis, and I masked any potentially identifying information with […] (Doody & Noonan, 2016). Specifically, terms that were masked included any identifying factors, such as names, dates, and specific medical features (e.g., diagnosis, medical outcome) that applied to either patients or healthcare providers. Doing this aided in preventing the identification of either the participant or patient. I consulted with my thesis supervisor during this process to help me alter any identifying information I may have missed. In addition, I reminded participants that no identifying information was shared with the unit manager or other hospital administrator or staff.

Next, I maintained confidentiality for my participants by storing their data in a secure manner. For this study, I personally transcribed each audio and video-recorded interview. The interviews were recorded using an audio-recorder that I purchased specifically for this study and kept in a locked drawer in my house when not in use, with videorecording being conducted via Microsoft Teams. All audio files from the recorder were immediately transcribed to my password-protected computer and deleted from the audio-recorder after each interview. The transcribed audio-recorded interviews were kept on a password-protected Word document, which was stored in an encrypted file folder on my password-protected computer. I am the only individual who had access to this information, as the software and Word documents are stored on my password-protected personal computer. Furthermore, I scanned consent forms, demographic sheets, and other generated data (i.e., field notes, reflexive notes) and stored them electronically in an encrypted file folder on my password-protected personal computer that only I had access

to. I backed up all raw data, including any email correspondence with the participants, to an external hard drive, which was password protected. This hard drive was kept in a locked drawer in my home that only I have access to. Any raw data shared with my faculty supervisor was through a secure, password-protected Sync account. Although the Tri-Council's (2014) policy statement and the ethical review did not suggest a timeline for when a researcher must dispose of the data, after five years I will shred original hardcopy documents and permanently delete all audio recordings and emails.

To conduct member checking, I sent the preliminary themes of the study via email to two participants for validation. This email was sent from my university email. The data were saved in a password-protected Word document. To access this document, each participant used their chosen pseudonyms as the password for the encrypted file, thus protecting their confidentiality.

Data Generation

According to Fetterman (1998), conducting qualitative interviews takes the researcher into the "heart of the phenomenon classifying and organizing an individual's perception of reality" (p. 40). For the purposes of this study, I generated data by conducting in-depth, semi-structured qualitative interviews to inform my understanding of the experience of being a pregnant RN working on an L&D unit. Qualitative semi-structured interviews are conversations that serve the purpose of gaining in-depth understanding of a topic for which little is known (Bricki & Green, 2007). The method of semi-structured interviews for data generation was appropriate for a qualitative descriptive study, as they captured the participants' personal experiences of a phenomenon (Sandelowski, 2000). I conducted one initial interview with each participant. Each participant was informed that a second interview might be needed to clarify

information from the first interview. I did clarify information with one participant in a second 10-minute phone call interview.

To begin the interview, I introduced myself to my participants as a researcher. For this study, the participants from the urban centre had a previously established relationship with me because of my current employment on L&D at this site. Therefore, I explained that my role was that of researcher and not co-worker at the start of each interview. When I began the interview with participants from the rural location, I introduced myself and provided a brief introduction of my background and my interest in this research topic. Before I proceeded with the interview, I provided verbal appreciation to the participant for agreeing to participate in the interview and research study. I then had conversational, informal dialogue with each participant to set them at ease. As an example, I reiterated to the participant the purpose of this study, such as:

> Thank you for meeting with me today, I look forward to hearing your experience of working as a pregnant nurse on L&D. It is my hope that through this conversation today, I can gain a better understanding of what this personal experience was like for you.

Starting the interview in this way helped focus the conversation to the research topic (Bricki & Green, 2007). Additional information on potential dialogue is available in the sample script I created (Appendix I). Informal conversation sets the tone of the interview as a conversation with the aim of deepening an understanding of an experience rather than a clinical interview (Bricki & Green, 2007). I also engaged in small behaviours that can enhance rapport, including dressing professionally but not formally, avoiding jargon or slang, and expressing authentic interest in my participants' answers (DeJonckheere & Vaughn, 2019).

Once the participant appeared to be comfortable, I noted basic information, including the time and date of the interview. Next, I verbally discussed with the participant the contents of the

consent form. At this time, I requested permission from the participant to digitally audio and video record the interview, which every participant consented to. In qualitative interviews, "words are the main currency of the interview" (DeJonckheere & Vaughn, 2019, p. 8) and are subject to analytic interpretation. Therefore, audio-recording of a qualitative interview is viewed as standard practice, as it allows the interviewer to focus on listening, probing, and using follow-up questions (DeJonckheere & Vaughn, 2019). I then asked the participant for a pseudonym, which I then used throughout the study, and began the interview after reiterating that the goal of the conversation was to generate a deeper understanding of their experience of being a nurse working on L&D while pregnant.

DeJonckheere and Vaughn (2019) and Sandelowski (2000) recommend developing an interview guide to facilitate dialogue with participants. My interview guides for primiparous and multiparous participants were developed based on concepts discovered within my literature review and followed the framework proposed by DeJonckheere and Vaughn (2019). These guides are presented in Appendices A and B. This framework suggests 5–10 questions, which is consistent with other scholarly opinions on qualitative interview guides (Bricki & Green, 2007; Creswell & Poth, 2013). For this study, I utilized six core interview questions in each guide, with prompts for conversation listed under each core question (Appendices A and B). For example, "What was it like to work as a nurse on an L&D unit while pregnant" and "What events occurred while you were pregnant and working that were significant for you?" In addition, I utilized prompting techniques, including echoing (i.e., repeating or summarizing ideas), silence, and expansion (i.e., asking the participant to elaborate). Prompts encouraged the participant to discuss their experience in more detail and, thus, led to a fuller description of the phenomenon (Creswell & Poth, 2013).

That said, the interview guides were developed with the understanding of the fluid nature of qualitative interviews. Carter and Goodacre (2012) stated that modifying interview questions during a qualitative study is not a negative occurrence but, rather, shows researcher engagement since they allow the data to be molded by the participants' words. I did modify the interview to allow for a more fluid conversation: specifically, at times, I altered the order of the questions that I asked based on the flow of conversation.

Although the preferred method for conducting the interviews is in person, due to the COVID-19 pandemic, this was not feasible. Public health guidelines at the time of my research study did not permit in-person interviews; therefore, I negotiated conducting either a phone interview or a videoconference interview via the Microsoft Teams platform (Microsoft, 2020). Every participant chose a videoconference interview via Microsoft Teams, which was the medium used apart from one follow-up phone call interview. This is the video-audio conferencing platform utilized by the university where I am completing my master's thesis; therefore, it was an appropriate choice. Video-conferencing calls could be recorded within this platform, which I utilized with participant permission during this research process (Microsoft, 2020). The privacy and confidentiality section of Microsoft Team's policy states that data will be deleted from the Cloud, where video-conferencing data are stored, within 30 days of the user deleting the recorded videoconference (Microsoft, 2020).

Data-collection centres for Microsoft Teams for Canada are in Quebec City and Toronto (Microsoft, 2020). Based on this policy, it is my understanding that once I produced a final research report and deleted the video conferences, they would also be deleted from Microsoft Team's storage within 30 days (Microsoft, 2020). I informed each participant of this, and I only video-recorded the conference if they accepted these terms. Every participant in this study did. I

also used the audio-recorder as previously described as a backup method for all interviews. From the Microsoft Teams terms and agreements section of their website, unless criminal activity is suspected, all conferencing calls are private/confidential (Microsoft, 2020). I again informed participants of this so they could make an informed decision when either permitting or denying recording of the interview.

According to several sources, videoconference calls are effective ways for generating qualitative data (Bricki & Green, 2007; DeJonckheere & Vaughn, 2019; Sedgwick & Spiers, 2009). This method was chosen over conducting phone interviews due to the added benefits of videoconferencing interviews. The medium of videoconferencing interviews was explored by Sedgwick and Spiers (2009), who noted multiple advantages with this method of interviewing, such as the ability to view facial expressions, record both the audio and video aspects of the interview, and have a more conversational, natural flowing discussion in comparison to telephone interviews. Moreover, Edwards and Holland (2013) discussed the concept of micro-geographies within qualitative interviews, noting that the participant and researcher share a unique power dynamic that is present and related to the spatial location of the interview. By conducting the interview via Microsoft Teams conferencing, the participant and I were in control of our own separate spaces, which may have been helpful in reducing power imbalances.

Specific instructions were provided to participants before commencing the interview to aid in noise reduction and disturbances, such as I asked the participant to schedule the interview at a time that was convenient for them and when childcare was available. In addition, I shared with the participants that sensitive information might be shared, and I encouraged them to reflect on whether or not they would want to have their spouse present.

I obtained a meeting link that was sent to the participants just prior to the scheduled interview time. In addition, I continued to review the user agreements and policy of Microsoft Teams and was transparent with participants about any terms that may lead to a breach of confidentiality. In case of technological malfunction, I informed the participant that I would immediately call them back to decrease interruption in conversation and for data generation to continue. During the interview process, I did not experience any technological malfunctions.

The length of qualitative interviews is dependent on each study's goal; however, qualitative interviews typically last 30–90 minutes (Bricki & Green, 2007). To reduce conversational burnout and still gather rich data, I adhered to this timeframe with interviews, which lasted no longer than 60–75 minutes. As a novice researcher, keeping to a time limit helped me in my data analysis, as many researchers become overwhelmed by the quantity of data when beginning transcription (Sandelowski, 1995).

Data Analysis

Thematic analysis was used to analyze the qualitative data generated in this study. Thematic analysis is a foundational method of analysis used in qualitative research and is recommended for novice researchers (Sandelowski, 2000). This method of analysis consists of identifying, analyzing, and reporting patterns within data, thus leading to an organization of the data into rich, thick descriptions through interpretation (Braun & Clarke, 2006). This process is data-driven in nature, thus making it conducive to a constructionist approach and appropriate for areas of research where participants' voices are lacking from the current body of knowledge (Braun & Clarke, 2006). As little is known about the experience of being pregnant while working on L&D, this method was particularly useful in giving voice to this population.

Due to the fluid nature of qualitative research, data generation and analysis occurred concurrently throughout this study (Braun & Clarke, 2006). To guide me in my thematic analysis, I utilized the three steps of data analysis proposed by Braun and Clarke's (2006) analytical framework. These steps included (a) familiarization with the data and generating initial codes, (b) identifying categories across the data, and (c) creating initial themes. These three steps will be discussed in further detail in relation to my study.

Familiarization with the Data and Generating Initial Codes

I began with immersion into my data set through the transcription process, as I personally transcribed each audio- and video-recorded interview. During the transcription process, I noted pauses in speech, change in tone, sighs, or laughs to aid in capturing the essence of participants' words. Any statements or personal identifiers, such as the names of physicians or colleagues, were masked or removed during this transcription process to protect the participant's identity.

Once each interview was transcribed, I printed each transcript and re-read the interview to further immerse myself in the data prior to beginning coding. By immersing myself in the data, I furthered my ability to be inductive in my approach to the analysis of data (Braun & Clarke, 2006). I did not try to code the data into a pre-existing frame or with any pre-conceptions I had on this topic. During my initial read through of the interviews, I noted and entered initial analytic memos, which aided me in my process when I formally began coding. Writing is an integral part of the analysis process; therefore, I wrote my ideas down during the first phase of my analysis into a reflective journal that I stored on a password-protected Word document in an encrypted file folder (Braun & Clarke, 2006).

Once I familiarized myself with the data, I began to generate initial codes. As the lone coder for this study, I conducted a line-by-line analysis of each transcript and looked for repeated

words or ideas that appeared to be meaningful to the participant. By looking for repeated words or ideas, I identified pertinent codes using in vivo to generate codes and patterns reflected in the coding. In vivo coding is a method of coding that uses the participant's own words for codes, which is appropriate for novice researchers and qualitative descriptive studies (Saldaña, 2016). Once I finished the initial coding of each transcript, I placed together codes that appeared to have shared meaning and captured similar thoughts, feelings, or ideas. I was generous in creating groupings of codes based on patterns that appeared during the initial coding, as at that time I did not know what was pertinent to this phenomenon (Braun & Clarke, 2006). When any code was removed from an initial grouping in the analysis process, I made a note in my reflective journal explaining why I believed that code was no longer relevant to that grouping. The coding process was iterative in nature, as I moved back and forth between the entire data set, the coded extracts, and my written analysis (Bradshaw et al., 2017).

Creating Categories

The next step in the analysis process consisted of pattern or focused coding, where I organized data similar in nature into categories based on my initial groupings of codes (Saldaña, 2016). These categories, although similar in nature, did not have strict inclusion or exclusion criteria initially (Saldaña, 2016). By searching for patterns across the data set, I was able to identify what was consistent and different between each interview (Saldaña, 2016). In addition, I systematically analyzed and compared units of data within each interview across the entire data set (Braun & Clarke, 2006). For example, I asked myself, "What am I seeing here?" Categories were expanded and collapsed as new data and patterns emerged to allow for a data-driven analysis. If categories shared similar meanings but had slight distinctions, sub-categories were

created to improve cohesiveness within each category (Braun & Clarke, 2006). I recorded my reasoning for these analytic decisions in my reflexive journal.

Once the data were organized into categories, I used a strategy proposed by Saldaña (2016, p. 14), referred to as the "touch test," when I created the final name for my categories. Saldaña (2016) described this method as a way that a researcher can review categories that seem uninspiring and change the category's name from a topic to a concept. After each category was named, I created a clear description that depicted what each category represented. I sent the preliminary categories of the data and their definitions via Sync to my thesis supervisor for feedback. After the findings were reviewed by my supervisor, I then sent an encrypted e-mail, which contained the data in a password-protected Word document, to two participants' personal email addresses to conduct member checking (Sandelowski, 1995). The participants were chosen based on their initial interviews, as I sought validation from individuals who provided rich descriptions of their experiences. By utilizing member checking as a validation strategy, I was able to gather confirmation from the two participants that my initial analysis was representative of their experience.

Identifying Initial Themes

Once categories were richly supported by in vivo codes, organized, and named, I began to analyze the data to develop an over-arching theme. A theme captures what is important about the data in relation to the research question and depicts a patterned response or meaning that is present in the entire data set (Braun & Clarke, 2006). Themes were formed as an outcome of coding, categorizing, and reflecting analytically on the data set in relation to my research question (Saldaña, 2016). Saldaña (2016) recommended creating a visual diagram: for example,

a tree diagram, to aid a researcher in the development of themes. I utilized this strategy when developing the theme of this study.

Braun and Clarke (2006) suggest that each theme must tell a story and that this must fit within the overall story of the entire data set. By reviewing the individual codes and the categories created, I identified a central over-arching theme of transformation. By engaging in this iterative process and creating an audit trail through reflexive journaling, the theme I identified more accurately reflects the experience of being pregnant while working on an acute care L&D unit.

In addition, in my final report of the research findings, I utilized direct quotations from the interviews to support each verified category. This is consistent with a qualitative descriptive approach, as it enables a comprehensive description of a phenomenon that is close to the verbatim data (Bazeley, 2009). The findings from this study were examined in relation to the research question and literature review to produce a final report, which was sent to my faculty supervisor and committee for revisions and feedback (Braun & Clarke, 2006).

Rigor and Trustworthiness

To promote rigor and trustworthiness, I incorporated into this study the criteria of credibility, transferability, confirmability, and dependability initially proposed by Lincoln and Guba (1985). These principles are well suited for a qualitative descriptive study and, therefore, were utilized in this research process (Bradshaw et al., 2017).

Credibility

Credibility refers to the authenticity of the generated data and findings of the study (Lincoln & Guba, 1985). To promote credibility, I utilized the data generation method of an in-depth qualitative interview. This approach allowed me to establish rapport with each participant

and aided in the development of a trusting relationship, both of which enhance credibility. In addition, member checking was utilized as described in the data analysis section, as this allowed for verification of findings. When the two study participants involved in member checking confirmed they were able to "see themselves" in the preliminary findings, this demonstrated that I was able to capture the authentic voice of the participants and their experience.

Another measure taken to ensure the findings of this study were credible is the interaction I had with my supervisor. Through my analysis process, I discussed my thought processes with my faculty supervisor to confirm that my findings were reflective of my participants experience.

Transferability

Transferability refers to applicability of the research findings or how relevant the generated findings are to other populations or settings in different contexts (Lincoln & Guba, 1985). Measures utilized to promote transferability were the sampling strategy of purposeful sampling and maximum variation sampling. In addition, participants provided thick descriptions of their experiences, which were used when creating the written report. These thick descriptions were supported using a reflexive journal. Keeping a record of my thoughts throughout the research process allowed me to include sufficient detail in my written report, which will allow other researchers to evaluate whether the findings in this study are applicable to their area of inquiry.

Confirmability

In qualitative research, confirmability refers to the neutrality of qualitative data (Sandelowski, 1995). I recognized potential bias exists when conducting research on a unit where I was currently employed. To enhance confirmability, I remained grounded in the data by using verbatim quotations from participants in the research findings. I asked clarifying questions

during the interview process, when needed, to ensure that my understanding of what was shared represented the participant's experience. As previously stated, I also used a journal throughout the research process to engage in reflexive thinking, with this strategy also aiding in confirmability.

Dependability

Dependability refers to the extent to which the research investigation would yield similar observations to the original study if replicated (Lincoln & Guba, 1985). To maintain dependability in this study, I utilized an audit trail for transparency of my thought/analysis process to the readers. An example of an excerpt from my audit trail is available (Appendix J). In addition, I included the exclusion criteria that limited the involvement of participants who began maternity leave early due to COVID-19. Since I believed the pandemic had the potential to affect pregnant nurses' experience of their pregnancy, particularly if they started their maternity leave early, these individuals were excluded from the study. I believe excluding these criteria led to findings that are more replicable in the future.

Limitations of the Study

This study was limited to the subjective experience of being pregnant while working on L&D as described by L&D nurses at two sites in Southern Alberta: a small urban centre and a rural centre. The urban centre is a level two trauma centre, and therefore, deliveries before the gestational age of 32 weeks are not common unless imminent delivery is expected. Therefore, this study did not capture the experience of L&D nurses who deliver infants before this gestational age. By not including L&D nurses who work at a level three hospital, transferability of these findings may be more limited; however, I included a rural site to allow for an alternative perspective.

Every participant who agreed to be a part of this study was Caucasian, leading to the unintentional exclusion of women from different ethnic backgrounds. Having a larger sample of participants, including those from different ethnic backgrounds, may allow for a more in-depth and broader understanding of this phenomenon in future studies.

As will be identified later in the findings chapter, the findings suggest that primiparous women are particularly vulnerable to the negative aspects of working on L&D while pregnant. Therefore, a research study evaluating only primiparous women and their unique needs may be beneficial.

Dissemination of Knowledge

The dissemination of research is an important first step on the path toward knowledge translation and practice change (Edwards, 2015). For this research study, my aim was to illuminate what it means to be pregnant and work on L&D. I intend to share the findings from this study at obstetrical conferences to aid in a collective understanding of this experience among obstetricians and nurses: as an example, the Canadian Association of Perinatal and Women's Health Nurses holds conferences and webinars, where I hope to share my findings.

To briefly summarize the findings of this study, the findings led to the over-arching theme of transformation with three categories created representing each unique transition that a pregnant L&D nurse goes through during her pregnancy and childbirth. These three categories are (a) balancing act, (b) the power of the sisterhood, and (c) becoming a mother. During each category, a nurse experiences transitional periods impacting how she perceives her body, her co-workers, and her identity as a nurse and mother.

It appears that a pregnant L&D nurse struggles to balance her personal needs with her professional responsibilities, which is explored in detail in the category balancing act. As her

pregnancy progressed, participants reported relying heavily on the support of co-workers, which was perceived as being beneficial for their well-being. Yet, this support also came at a cost as discussed in the category the power of the sisterhood. In this category, participants shared how they were scrutinized for the choices they made in their own pregnancies, specifically if the choice the pregnant nurse made did not align with the popular opinion of co-workers.

Consequently, it appears that working as an L&D nurse while pregnant shapes a woman's perspective of her own birth experience and the choices she makes in her pregnancy and childbirth. This is explored in the category Bonded by Birth. Additionally, in this category, the findings suggested that when a nurse returns to practice post-partum, her perspective of her nursing profession and practice changed as she viewed the birth experience through a new set of eyes due to her own childbirth experience. Indeed, participants in this study expressed bonding differently with patients due to their own birth experience, with participants noting a distinct change in their personal practice.

Chapter Summary

The demand for experienced L&D nurses is likely to increase in Canada (World Health Organization, 2022). Given the important role of these healthcare professionals in promoting maternal and newborn health, it is essential that job attrition be limited, and individuals experience high job satisfaction (AWHONN, 2018). As 34.9% of RNs in Alberta are below the age of 35 (Canadian Institute for Health Information, 2019), which makes them of childbearing age, it is reasonable that the needs of pregnant L&D nurses need to be understood. In this chapter, I provided an overview of the methodology for my research. This research methodology allowed me to describe the subjective experience of pregnant L&D nurses, which will be explored in the next chapter of this thesis, Chapter 4: Findings.

Chapter Four: Findings

As previously stated, the purpose of this research study has been to explore the subjective experience of nurses who work on L&D while pregnant in order to expand support for this specific and unique population. Developed from the nine qualitative interviews with nurses who worked on L&D while pregnant, the key finding of this study is the over-arching theme of transformation. The thematic arc of transformation captures the transitions of a pregnant nurse's identity as she becomes pregnant, experiences her own birth story, returns to practice, and views birthing with new eyes because of her own journey. The theme of transformation is supported by three categories, with each category representing unique transitions the nurse goes through: (a) balancing act, (b) the power of the sisterhood, and (c) becoming a mother. To understand the nuances between the over-arching theme of transformation and the categories of transition, I have brought forward a definition of transformation based on Merriam-Webster's (n.d.-a) definition of transform: "[an act or process] to change (something) completely, usually in a good way" (para. 1). Thus, the thematic arc of transformation captures this experience in its entirety, whereas transition is defined as "a change or shift from one state, condition, or place . . . . to another" (Merriam-Webster, n.d.-b, para. 1a)

To further elaborate on this definition of transition, Chick and Meleis (1986) defined transition as a passage from one life phase, condition, or status to another, thereby embracing the elements of process, timespan, and perception. Indeed, they suggested that process represents phases and sequence; timespan indicates an ongoing, yet bounded phenomenon; and perception captures how an individual gives meaning to the transitional experience. To relate this to my study, each category represents a unique transition that occurs for a pregnant nurse who works on labour and delivery (L&D), with the final outcome being a transformative experience as a nurse

returns to practice and views the birth experience through a new set of eyes due to her own journey through each transitional phase.

In the category balancing act, the findings have suggested that when a nurse becomes pregnant, she struggles to balance her professional responsibilities with her personal pregnancy as her body transitions through pregnancy. This first category is supported by three sub-categories: (a) physical implications, (b) organizational barriers, and (c) the weight of responsibility. Next, in the category the power of the sisterhood, I describe how pregnant L&D nurses face unique challenges and benefits due to their employment on L&D, including how a nurse's relationship with co-workers, physicians, and management may alter her experience as she journeys through her pregnancy and childbirth experience. This category is supported by three sub-categories: (a) that's my blood my kin, (b) the scrutiny of the sisterhood, and (c) pressure to perform. During an L&D nurse's own birthing experience, she transitions to her new identity of mother, which is explored in the final category, becoming a mother, supported by three sub-categories: (a) wearing two hats, (b) left in the dark, and (c) bonded by birth. These categories and their subcategories are presented in Table 2.

The presentation of this study's findings and the overarching theme of transformation suggests that being a pregnant L&D nurse is unique, challenging, and impactful to a nurse's identity and well-being. The first category explored is balancing act.

Table 2: *The Transformation of Becoming Mother*

Category	Sub-Categories
Balancing Act	Physical Implications Organization Barriers The Weight of Responsibility
The Power of the Sisterhood	That's My Blood, My Kin The Scrutiny of the Sisterhood Pressure to Perform
Becoming a Mother	Wearing Two Hats Left in the Dark Bonded by Birth

Balancing Act

The nurse's struggle to balance her professional responsibilities with her personal pregnancy is described in this category. It is composed of three sub-categories: (a) physical implications, (b) organizational barriers, and (c) the weight of responsibility.

Physical Implications

Seven participants expressed concerns with the physical demands of working on L&D that were exacerbated as their pregnancy advanced. Issues included having poor sleep, which was accentuated by working shift work. With the support of their manager, some participants actively sought to modify their work schedule to address their concerns:

> *I didn't want to work night shifts because you are already so tired being pregnant. I didn't think I'd be able to flip back and forth being pregnant between days and nights, so I applied for a day-evening position before getting pregnant. (Bea)*

Having physicians who understood the physical demands of providing care and how these demands were exacerbated as pregnancy advanced was also greatly appreciated. This was noted with all physicians who worked with pregnant nurses, whether or not it was the nurse's personal physician. However, participants did express being thankful for working with their personal doctor when they experienced complications, such as pelvic pain.

> *In my last pregnancy, [the manager] allowed me to go modified; it is nice that they allow that stuff to help me out. She [my doctor] knew I had a lot of problems with my pelvis, so she was always very supportive at work: like, "Anytime you think we need to go off, we don't want a premature baby, anytime you are ready you let me know." My doctor was just so good. (June)*

Risk of injury, such as back pain, excessive exertion, and repetitive strain, was brought forward by multiple participants, with specific examples expressed by participants, including when transferring patients from their bed to a stretcher and during emergency situations.

> *We get someone ready for a c section and we are running a bed down the hallway turning corners rapidly. How many of us have gotten injured pushing beds? So many of us. And then you throw in pregnancy. . . . You are a higher risk of injury if you aren't careful. (Beth)*

As a nurse's pregnancy progressed, concern for her safety continued to develop as her increasing girth became a barrier to providing patient care. Thus, as a nurse transitions through pregnancy, the contours of her body appear to no longer fit the contours of her work, leaving the nurse to contort her shape to fit into the familiar, yet now awkward, demands of her work as she transitions through pregnancy.

Being on your feet all of the time and helping women labour is a lot on the body for sure, like having to get your body into different positions to help people who were labouring. By the end you have this huge belly, and it was tricky. (Halle)

Although some nurses found their ability to provide care was limited by their pregnancy, others found they were limited by their co-workers. Three participants voiced frustrations as co-workers inhibited them from providing care that was deemed unsafe for a pregnant nurse:

I find when you are pregnant everyone assumes you can't lift things, you can't do things, but I had really good pregnancies. I did find that people would kind of treat you, like, "Oh you can't do that you're pregnant," or "Oh don't do that you're pregnant," but I was fine, and I wanted them to treat me like I was fine. I had very easy pregnancies and really easy deliveries, so I appreciate them considering that, but I was like, "I need to go back to my job now, let me take care of my patients and do my thing." (Tatum)

Yet, others described this help from co-workers to be a positive thing:

People tried to get you on first break or thought about you a bit more or didn't give you heavy loads and would help you transfer patients. I was thankful for that. (Lucy)

However, receiving support from co-workers might also be dependent on the amount a pregnant nurse works. For Sydney, being a casual employee led to feeling like she was receiving less support from co-workers.

I was too tired with the 12-hour shifts, so I did the 8-hour shifts, but working casual was harder. They were a bit more . . . "if you can't do the job," so I didn't feel as supported.

Although some of the physical limitations that occurred for L&D nurses as they transitioned through pregnancy were supported by co-workers, management, and physicians, organizational structures appeared to also impact the pregnant L&D nurse.

Organizational Barriers

This sub-category describes characteristics of work structures identified by the participants as being detrimental to her well-being, specifically: level of patient acuity, missing breaks, being short-staffed, and how patients who experienced a fetal demise were assigned. High patient acuity and missed breaks were factors present prior to a nurse's pregnancy; however, as nurses progressed through their pregnancies, they became cognizant of the implications of these factors on the health of their developing fetus. Participants described being overwhelmed when, at times, they felt they were unable to balance their own needs, including their fetus's needs, with the needs of the unit and patients:

> *It is difficult, it is such a busy area, it's high demand. . . . Especially with c sections or any emergency, you are constantly go go go, and it's much more difficult when you are really pregnant. . . . Sometimes, you have those patients that are 1:1, and they are hitting active labour, and you can't leave them, or you are running oxy, or you have an epidural, or they are clicking in really quick, and you don't get a chance to leave them for hours on end, so that is hard. . . . We are working so hard, and you only get really short breaks if any. . . . You don't just get to walk out of your room and take a drink, or go to the bathroom, or take care of yourself. So, I find myself going long hours without taking care of myself and that is making this pregnancy way harder. (June)*

Thus, it appears that the high patient acuity of L&D units may be particularly detrimental to a nurse's well-being when she is pregnant herself. The inability to care for oneself when working while pregnant is further exacerbated when the unit is short-staffed. Indeed, experiencing short staffing was described by seven participants, as per this example:

But breaks. . . . They are okay, lots of the time, we get them late or we don't get them. . . . Sometimes, we don't get them at all if we are short staffed. (Bea)

While the participants tried to balance their health with the needs of their patients, nurses struggled to do so, as often, breaks were limited or missed all together:

I tried to just make sure I did some things like step out for a second, grab a granola bar. I was more strategic with the things like food I brought to work. A lot of the time, I would just bring a water bottle or something into the labour room so then I could still have something to drink when I was stuck in there. (Halle)

In addition to concerns about staffing, multiple participants brought forward that working in an area where patients experience fetal loss negatively impacted their well-being:

We don't typically give pregnant nurses [a patient with a fetal] demise. Why would someone losing a baby want someone coming in with their belly sticking in their face? But mostly, we can hide bellies, I think a lot of times, it is to not put a nurse through that. It is very specific what we deal with, and if we can avoid it, we do. I think if someone does a well-thought-out assignment, it can really benefit the unit and the mental health of our staff. (Rem)

Although an informal policy, when patient assignments took into consideration an L&D nurse's personal pregnancy, such an approach was perceived as having a positive effect on nurses' overall well-being. Unfortunately, at times, a pregnant L&D nurse may be the only one able to provide care to a woman experiencing a fetal demise. This occurred for Sydney, as she describes her experience while being pregnant:

The charge nurse had apologized about assigning me to them. I agreed to it because there wasn't really another option. I didn't think it was going to be as upsetting as it was.

. . . It was very upsetting when the baby was delivered. . . . You know, it's hard enough on a good day, but when you are pregnant, and they are too, I kept thinking, "That is the size of my child. What if...?"

Other participants echoed Sydney's "what if" feeling. Out of the nine participants in this study, seven described struggling with separating their knowledge of caring for patients experiencing losses with the future outcome of their personal pregnancy. Although Sydney was the only participant who knowingly cared for a woman experiencing a loss, another participant, Beth who was herself significantly pregnant at the time, was unaware that the patient she was assisting was delivering a still birth:

To walk back into that room with my pregnant belly and her looking at me like "and my baby is gone," I think that is what is hard, when you have people who are going through losses or traumatic things and here you are . . . pregnant. (Beth)

These findings seem to suggest that patient acuity, inadequate breaks, short-staffing, and working with patients who experience a fetal demise impacts an L&D nurse's well-being as she transitions through her pregnancy.

The Weight of Responsibility

For nurses who are pregnant, balancing her personal needs with her professional responsibility can be described as: "*A balancing act. It's just what you have to do . . . to survive and get through" (Halle).* Indeed, the weight of responsibility experienced by L&D nurses was echoed by five participants who expressed concerns about their own safety and the safety of their patients when they were the only nurse available to assist patients during emergency situations, putting both the nurse and patient at risk of injury:

I remember one time one of the doctors said, "You shouldn't have to do that," but at the same time, in that situation, sometimes you are the only one that is there and has that experience and can do that. In that instance, you just do, you just naturally do what you are supposed to do to care for your patient, whether you are pregnant or not. (Beth)

Indeed, there is a sense of personal responsibility and duty to perform tasks even when risk of injury is present. The personal sense of responsibility was deeply rooted, as six participants described the anxiety they experienced when unable to perform tasks because they were pregnant:

I was feeling like I was useless; I couldn't get there fast enough, I was just like, "Oh if I can't do this, what if I was the only one available to help?" Knowing that they were relying on me to run down there, and I couldn't do it. That was really tough. (June)

Ultimately, because she felt unable to provide the nursing care she wanted to, the care she felt was her personal duty or responsibility, June decided to begin her maternity leave early:

The situation where a code was called, and I was trying to run to get to it, and I couldn't. . . . That's when I knew I was done. I was finished. That situation really brought it to my attention that I shouldn't be there if I can't give the care that I want to give . . . need to give.

Thus, at times an L&D nurse may be unable to perform what she views as both her professional and personal responsibilities due to her evolving pregnancy, leading to increased anxiety and feelings of inadequacy in her nursing role as she transitions through pregnancy.

During the transition to motherhood, pregnant nurses rely on their co-workers for support as their personal and professional identity evolves. The influence of co-worker's opinions and

support on the well-being of a pregnant L&D nurse was a central finding of this study, and it will be explored in the category of The Power of the Sisterhood.

The Power of the Sisterhood

This category explores the connection between pregnant L&D nurses and their co-workers, physicians, and management. It appears there is comfort in transitioning through pregnancy and delivering amongst co-workers, with participants describing the close relationship between nurses as being "like sisters." Yet, implicit within this type of relationship comes co-workers' input into the personal choices made in participants' own pregnancy. This category is comprised of three sub-categories: (a) that's my blood, my kin, (b) the scrutiny of the sisterhood, and (c) pressure to perform.

That's My Blood, My Kin

The deep bond between L&D nurses and their co-workers and physicians is explored in this subcategory. Many benefits were described by participants, including proximity and access to care from obstetricians. For example, Halle described her experience with pre-term bleeding during her pregnancy:

> *It was at the end of a 12-hour shift, I felt a gush, and I thought, "I'm losing this pregnancy." I started to panic, and I went to one of the OBs that I knew, and I told her my situation, and she took me into a triage room, and she just ultra-sounded me right there. I felt like I was in the perfect place because she took me, and within ten minutes, she found a heartbeat, and I found so much relief.*

Although an ultrasound for pre-term bleeding is viewed as standard care, other participants described care that was beyond typical standard of practice. For example, Lucy

received an ultrasound when she expressed to her obstetrician her anxiety of losing her pregnancy after witnessing patients experience fetal demises:

> *I think that because of our working relationship and because she sees worst case scenarios too, she knew in that moment there was no basis for my fears or anxieties, except for that I had seen other people go through losses. I had no physical symptoms, but she knew me. . . . She knew me as a person. She had been my physician for 5-6 years at that point, plus she had been my co-worker for almost 10 years. There was a relationship there, and my mental health was just more important than the credibility of whether an ultrasound was necessary. (Lucy)*

This connection was echoed by others, as feelings of comfort and trust were noted by every participant in this study when they described being pregnant and delivering where they worked:

> *When you develop those strong relationships with people, they are going to take care of you in a way. . . . That's your BLOOD, that's your KIN, you feel very connected to that person. . . . I wanted to deliver my baby where I was comfortable, with the people I trust the most, my people. I trust our doctors, I trust them with my life, with my baby's life. I wanted those people to be there for me. (Rem)*

Other positive mental health benefits of being part of the sisterhood were being able to share their experience with others during difficult times. Halle described her experience with fertility treatment:

> *Some of the nurses that I worked with had gone through it as well, so I had lots of people to talk to and lots of people had similar stories. Not necessarily this treatment, but fertility treatments, and so it was nice to be in an area where I had support and was able to talk about it. I think that's what kept me going.*

For participants in this study, their relationship with their colleagues seemed to reflect a relationship that sisters might share, where there is opportunity for deeply personal conversations. This was evident as Rem shared her thoughts on what it was like for her to work on L&D:

> *It's a sisterhood. I don't hang out with my co-workers outside of work, but in work, those are my safe people, that's my safe space. I felt like I could be so vulnerable with them in a way that I couldn't be vulnerable with my friends outside of that place because of what we go through together. Miscarriage makes people uncomfortable in general. . . . It's weird; it's taboo. We don't talk about it, but like at work we do, we normalize it, and I think instead of calling someone and making them feel uncomfortable with me sharing that news and feeling a certain way, I could just let it all out at work.*

Another example of having a deep personal relationship with their colleagues is sharing news that they were pregnant very early in their pregnancy, even though they had yet to share the news with family and friends:

> *I just wasn't afraid to tell people because if something was going to happen, they would know I miscarried, I would want them to know for the support. They will know if it is a good pregnancy, or if it isn't. At 4 or 5 weeks I started to tell people at work. It was hard to hide when I was sick, especially with covid and them asking if I am sick, but I wasn't afraid to tell anybody about it because they are my people too, I wanted them to know. (June)*

There also appeared to be comfort for L&D nurses in knowing the professional expertise of those who will be taking care of them when they deliver.

When you work there, you know what you are going to get. Whereas, if you don't, you come in not really knowing anything about anyone. I think working there and knowing that you could go to a specialist and why wouldn't you go to a specialist when you have that opportunity is a big benefit. (Beth)

From this sub-category, it became evident that there is a deep connection amongst nurses. Belonging to the sisterhood has many benefits as described in this category. However, the influence of this connection on choices made during pregnancy was a prominent finding in this study, which will be explored in the Scrutiny of the Sisterhood.

The Scrutiny of the Sisterhood

The influence of professional relationships on personal choices made as an L&D nurse transitions through her pregnancy is explored in this subcategory. As previously discussed in the sub-category, That's My Blood, My Kin, the ability to access a specialist was seen as a benefit by multiple participants and was, in fact, perceived as the norm. Consequently, deviation from this approach was not well received. As Tatum explained:

When I told another nurse that I was going to deliver my third baby in a rural location, you would have thought I said I was going to deliver her in the forest with no one other than a gramma singing hocus pocus. She was like, "Why would you do that?" This is a legit nurse who I told I was delivering my baby in a HOSPITAL and that was her reaction.

Indeed, Tatum further elaborated that in hindsight, she wished she had delivered her first two children at a rural location, but she chose not to out of fear of *"What would they say?"* Although nurses viewed the ability to make informed decisions as beneficial, the ability to make a choice that goes against the popular opinion of co-workers may lead to dissension as a nurse transitions

from co-worker to patient. Six out of the nine participants stated that choosing a doctor during their pregnancy was difficult due to the fear of scrutiny from co-workers:

> *It is stressful as a L&D nurse choosing your doctor. Not going with the grain is difficult. . . .Whether you want them or not, those opinions, those people, will be involved. (Rem)*

Based on Rem's experience, there seems to be an implied "right" and "wrong" choice for an L&D nurse to make when choosing her physician. This concept was discussed in detail by multiple participants, with two participants sharing that in hindsight, they would have made a different choice, similar to Tatum:

> *I wish someone would have given me the advice to snap out of it. This is your pregnancy, it isn't a group decision and to not care about how someone may talk about it, about who you go to, and the choices you make. It is a very different dynamic to be pregnant and work on a unit where you are all consumed by it. (Rem)*

When Rem was asked to clarify what she meant by "a group decision" and "all consumed by it," she brought forward the unique professional power dynamics between nurses and physicians that an L&D nurse considers as she shifts to becoming a patient:

> *I knew I didn't want to go to . . . . because of the fact that she seems to have some weird kind of control over everyone, we put her on a pedestal, and everyone goes to her. So, I chose a doctor who was fairly new at that point, and I did really enjoy her practice, and how she was. So, I chose fresh, it seemed really neutral. I think she was a good fit at that time, but I don't know if that grew into the best fit, and the pressure of working with this individual and the pressures of the unit, there was no way I could switch. In theory, I could, but I couldn't deal with the aftermath that I essentially fired her as a doctor. My*

decision going back to her was because who else am I going to go to, and what would she say? I would have to see her everyday knowing I didn't choose her. (Rem)

Rem thought she was making a neutral choice and would not be subject to "*some weird kind of control,*" yet her employment on L&D still impacted the personal choices she made in her pregnancy. Although the physician she chose did not directly exert professional power over her, Rem perceived there would be professional ramifications if she chose another physician in her next pregnancy, suggesting that a pregnant L&D nurse cannot transition from nurse to being a fully autonomous patient because of "*the pressure of working with [her doctor] and the pressures of the unit*" (Rem).

For another participant, Lucy, she recalled the moment during her pregnancy that she made the decision she would not have a trial of labour after her first caesarean section and would have a repeat caesarean section. This moment is important for Lucy, as it depicts how a physician may lead a nurse into making what the physician views as the *right* choice:

This patient ended up with a forceps delivery, and it was brutal. Her bottom just exploded, and my doctor sutured this patient's bottom, and she was very matter of fact in showing me RECTAL tissue. We saw this woman's butt fat. I was throwing up in the garbage can, and she was just like, "Okay. this is why we don't do this…" Then we got out to the desk, my doctor sits beside me, and I remember touching her arm and looking over at her and saying, "I don't think I want a vaginal delivery. I am terrified that that's going to happen to me," and she said, "Lucy, I would never let that happen to you. That should happen to nobody." I decided right there that I was not going to have a vaginal delivery.

Although the physician did not directly state that Lucy should not choose a trial of labour after a caesarean section, through her teaching to Lucy with this patient, she groomed Lucy to make the *right* choice in the physician's eyes.

Seven participants in this study discussed another phenomenon: the act of choosing which co-worker would care for them in their own labour. For one participant, this was viewed as beneficial:

> *I feel like those are perks of the job you get to have for working in the area. You know people's personalities and how they mesh or don't mesh with you. The benefit is you have this choice. (Tatum)*

However, for other participants, such as Beth, this was a challenge and was perceived as possibly having consequences:

> *I think it's hard for choosing your nurse. When you come in, they say, "Pick who you want your nurse to be." That for me is so hard because I don't want anyone to feel like I don't want them. Someone made the comment, "Oh, like you didn't want me to be your nurse? Or why would you pick her?" I only get to pick one, but I would have had any of them.*

Thus, the choices made by an L&D nurse during her own pregnancy appeared to be heavily influenced by both prior and current relationships with co-workers and physicians. Although there are benefits to working in this area, such as being able to have insight into the competency of physicians and co-workers, the findings seem to support that there is pressure to make the "right" choice under the scrutiny of the sisterhood as a nurse transitions through her pregnancy. This pressure extends into the childbirth experience, as will be described in the final sub-category of this category: Pressure to Perform.

Pressure to Perform

Pressure to perform describes the burden that is felt by L&D nurses to be the "perfect patient" as they navigate shifting from an L&D nurse to a patient in the space where they work. Four participants shared that they felt unable to ask their physician questions during their pregnancy: *I was embarrassed to ask the doctor questions, I felt like I should know everything. (Sophie)*

Other challenges seem to exist for L&D nurses, as five participants shared that they were hesitant in accessing non-routine care during pregnancy, such as in-hospital assessment for concerns about fetal movement:

> *I remember sitting at home doing a kick count and was debating whether I should go in. I didn't want to be dumb or thought of as dumb. I didn't want a file full of outpatient forms of all the times I came in for silly reasons. I remember being like, "Should I go in or should I not," and I really sat on it for a while that day. Ultimately, I texted my co-worker, and she said, "If you have any concerns, you go in." (Rem)*

This highlights that a co-worker's support can aid nurses in accessing medical care. The need for validation appeared to be present, as eight participants expressed wanting to meet the standard of a "good patient" in the eyes of their co-workers:

> *I mean, you hear stories of girls checking their cervix themselves; they don't want to come in! They feel the pressure. They don't want to be the L&D nurse that shows up at 2 cm. I think its pressures of the unit, I know other people's stories by nurses telling them that were present. It seems like not a competition, but a reputation of these amazing L&D nurses that show up fully dilated. We all know those patients that we have to send home*

4-5 times before they get admitted. Nobody wants to be that person for any reason other than pride. (Rem)

Indeed, having and maintaining a reputation seemed to be central to their birthing experience, as this was shared by eight participants:

There's pressure to perform well. It's something we don't openly talk about, but it is an underlying thing. I can list five girls right now whose stories I know, not because of them, but because of the unit, and because they did great in labour. They weren't a "wuss." It's funny that you know those things, those details, that's all based off of how they performed in labour. We have this standard of what makes a good labour. (Rem)

I know when I was pregnant with my first I kind of had thoughts like, "Everyone's going to see my whole body, and then I have to work with them again, and how am I going to react in labour? What if I scream?" I think when you are going into a place where you know everybody is going to know you, and they are going to see you after, you feel a lot more vulnerable as to how they will react to you or what will be said about you. (Beth)

Four other participants noted that their first pregnancy and delivery experience was the most stressful and left them feeling particularly vulnerable to the emotional stress of delivering their baby amongst co-workers:

There was a moment when I screamed, and then I told myself to get myself under control because everybody knew me, and I could do this, and I was not going to act like that. I remember thinking, "Oh my gosh, I can't believe you just screamed like that, you can't be that. . . . You can't be a screamer." (Beth)

Moreover, it appears that the opinions of not only their colleagues but of physicians is also important to participants. For example, Bea recalled decisions she made in her childbirth due to the fear she had of displeasing her anesthetist:

> *In my head, nurse me was like, "Anesthetists like when I am around this dilated, so I will sit still for the epidural and won't be 8 cm and transitioning." That was a part of me getting the epidural at that point, and it is something no one else would think of: their doctors' preference.*

Bea's experience as well as the others depict that the pressure to perform in labour may be detrimental to an L&D nurse's well-being and perception of her childbirth experience as she transitions to motherhood.

Becoming a Mother

Explored in this final category is the change of identity that occurs as an L&D nurse becomes a mother. Ultimately, becoming a mother is not only personal but professional, as after childbirth, she has a new perspective on the birth experience, which impacts her professional practice. This category is supported by three sub-categories: (a) wearing two hats: I am a nurse, I am a mother; (b) left in the dark: being the partner of an L&D nurse; and (c) bonded by birth.

Wearing Two Hats: I am a Nurse; I am a mother

The nurse's struggle to separate her professional identity from her personal identity as she transitions through pregnancy is described in this category. A finding shared among all participants was that nursing knowledge impacts an L&D nurse's pregnancy and birth experience. Five participants shared they were comforted having knowledge about the birthing process:

I was induced with my first, so I knew what to expect. So, I didn't feel anxiety related to that because I knew it could be certain methods used for induction, and I knew it could go this route or this route. I think it actually helped in a sense; it gave me a little bit of control because I knew what to expect. (Sophie)

The use of the word "control" appears to be important, as four other participants mentioned that they appreciated feeling like they could control what would happen in their birth experience:

If something went awry with my L&D experience, I feel like I would kind of know what was going on because I understood what was happening. For me, it was comforting to know that if this happens, I know that they will take care of me. I know that this is what they will be doing. I know what I need to be doing to help myself and make it the safest best-possible process that it can be. (Beth)

Although there was comfort and confidence knowing about the birthing process, with this knowledge also came an understanding that negative outcomes were possible, even in one's own birth experience: *There is no ignorance is bliss when you work there and you're pregnant (Sophie).* Other participants like Sydney echoed this, who after working with a patient who experienced a fetal demise took steps at work to ease her anxiety: *For a few days after I was very paranoid, sneaking away with a doppler every time I was at work to hear my baby, to know [it] was okay.*

While Sydney accessed and utilized a doppler to detect a fetal heart rate, for others it was the electronic fetal heart rate monitor. In total, seven out of the nine participants described reviewing their baby's fetal heart rate tracing during pregnancy and delivery. It appears nurses cannot turn off their professional knowledge, including during their own childbirth experience, as nursing knowledge is the prism through which the participants viewed their pregnancy:

I kept asking them, "How does the tracing look, Is baby ok?" I kept asking what it looked like, and they were like, "Beth, if it's bad, we will let you know, but it's fine." You nurse yourself really. Even though you know they are taking good care of you, it's almost like you can't let go. . . . You can't let go of what you know and what you've seen and what you want to know. (Beth)

The concept of "nursing yourself" was explored by multiple participants, and it appeared to be exacerbated if complications occurred during a nurse's childbirth:

When you're monitoring a mom and you hear the decels on the monitor, your brain registers it. So anytime my son had a decel, I registered it. I knew exactly what that was, and I tried to figure out "Was that with the contraction or was it not?" Most were not with contractions, so that was nurse me being triggered. (Bea)

Two other participants described being able to accept the assurances of co-workers about the fetal heart rate tracing during their labour:

The nurses who looked after me were very experienced nurses. They were some of the nurses who had been there the longest and who had trained me. I remember having my back to the monitor for 90% of my labour because I didn't want to know. I trusted my nurse to do her job and let the doctor know if things weren't going well. I knew that wasn't my job in those moments. (Lucy)

Moreover, due to their professional knowledge, these participants made inferences about the plan of care during their pregnancy and labour as they understood non-verbal cues from healthcare providers. For example, during Rem's high-risk pregnancy:

Every single appointment with my doctor, with everyone, we'd walk in, and on their face would just be a look of doom of "I'm sorry." I know that look, I've given that look. It is not a good look to give.

Yet, they also used this insider knowledge to their benefit as they read the behaviours of their co-workers and physicians:

I know my doctor is pretty hesitant to give beta unless you are delivering that week, so that was something I knew from my nursing knowledge, that delivery wasn't imminent yet, as she hadn't said, "Give the beta." I was rationalizing things like that: She isn't at the point of giving me beta, so delivery isn't imminent. I knew that because I knew her. (Rem)

For others, knowledge of common practices and procedures meant being unable to let the professional nurse role go. Bea recalled transitioning to "nurse mode" and trying to resuscitate her son when he was born: *I was in nurse mode. I was flicking his feet, rubbing his back, stimulating him. I was like,* "*Cry, come on cry.*" The anxiety felt by Bea due to her professional knowledge was further exacerbated as she was able to read non-verbal cues and actions taken by her co-workers:

I burst into tears. The doctor said, "I am going to call rapid and talk to a neonatologist to see if he needs to go to the acute care centre," and then I got all teary eyed again. I knew he was going to the NICU because they started an IV, they were putting in antibiotics, we don't keep those babies, but when he said the acute care centre, I was more upset because we only send the super sick babies to that place.

Indeed, Bea's delivery was incredibly challenging for her. During her childbirth experience, she was analyzing the fetal heart rate. After he was born, she tried to resuscitate him herself, and

ultimately, she was aware that he would be transferred to an acute care hospital due to her professional ability to analyze his condition. Thus, it is evident that her entire childbirth experience was shaped from the lens of being an L&D nurse. Bea was not alone in this experience, four other participants talked about the health of their infants after childbirth using their nursing knowledge: *I knew his HR was okay because they weren't doing compressions (Sydney).*

All of the participants in this study stated that their identity as an L&D nurse impacted how they experienced becoming a mother:

> *It all was in my mind when I made my decisions. It is a very different experience being pregnant while working on L&D. It's really strange how certain professions like nursing truly infiltrates every area of your life. It's how you think about things, how you accept news, it's your perspective in everything. (Rem)*

As evidenced in this sub-category, the identity of being an L&D nurse cannot be separated from a nurse's personal life, including during her own childbirth experience, leading to participants having increased anxiety during the pregnancy and childbirth experience.

Left in the Dark: Being the Partner of an L&D Nurse

Every participant in this study discussed that their professional knowledge impacted their relationships with their partners during pregnancy and childbirth, including instances of miscommunication, lack of teaching, and intimate conversations informed by professional knowledge.

Gaps were observed by participants in communication and understanding for their partners, which meant that the pregnant nurse had to fill in these gaps for their partner:

He would come to appointments, and we would walk out, and it was interesting what his version of what happened would be. I think that is something to be said for people that work in healthcare: We are very good at finding the truth in what is being said by healthcare professionals, by doctors, anesthetist's, nurses. We are good at reading body language; we are good at reading tone. There is just so much more than what information is being said. I interpreted everything. It felt horrible to be the one to give that news to my partner. We see too much, we see it. I knew what they meant, not just what they said. (Rem)

Indeed, participants expressed having to act as the "interpreter" as they informed their partners of the meaning of what was said in appointments and during the childbirth experience, as the pregnant nurse understood the "nursing language" and everything that was implied, but perhaps not directly spoken. Others echoed this burden in relation to understanding potential outcomes of childbirth, such as Bea as she described her experience with her partner:

He wasn't expecting things to go sideways for us. My husband had no idea what he was walking into, and I don't think I prepared him whatsoever in any way that I probably could have.

Experiences shared by four other participants seemed to be consistent with Bea's experience since it appears that the expert knowledge of an L&D nurse limited what co-workers teach the pregnant nurses' partners during childbirth:

I think in some ways, he missed out on teaching. I think you do less teaching because you know the mom KNOWS; she's your co-worker, a nurse, she works with you. She knows all of these things, and then you just assume that the partner does as well. . . . I don't remember those conversations happening with my husband. I do think he just did what he

was told: "You go here," "You sit here," "You do this". I don't think there was a lot of prep ahead of time for him. (Lucy)

In Lucy's first pregnancy, she went for an emergency c-section, which she believed may have been the cause for lack of teaching. However, in her subsequent booked c-sections, she noted that lack of teaching was also present. Lucy described a gap present in teaching for women who have an elective booked c-section:

When we had our booked c section the next two times, a lot of that prep for him became my job. Husbands don't go to the pre-op appointments; they don't get to be a part of those conversations or know what to expect either. (Lucy)

Although Lucy believed that both she and her husband did not receive teaching during her first childbirth due to her professional knowledge, she also highlighted a gap that exists in education for all partners of pregnant women, as it is not routine practice for partners to attend pre-op appointments, leaving the burden of teaching to the pregnant woman. Therefore, while there were information gaps, other participants expressed gratitude that they had the knowledge to be able to prepare her husband for childbirth.

I think that was helpful because I could tell him what would be supportive and wouldn't be supportive. Beforehand, I talked him through the process and told him what would happen, so he was pretty well prepared. A lot of wives don't have that and don't know what to tell them. I do think our husbands have an advantage there. (Beth)

Three participants seemed to understand that their partner did not have the close relationships they shared with their co-workers, which had the potential to make their partner uncomfortable:

I do think there is the other part where we have a social rapport with all of the staff, but they come in not really knowing anybody. I think for them it can be kind of like social event like, "Oh you know my wife, but you don't know me," so they try to get to know your husband, so it's fine because mine is very social, but I can see how that can be hard. (Beth)

Another notable finding in this study was that intimate conversations with their partners about experiences that have significant impact on the participants' mental health were informed by the participants' professional knowledge. This was brought forward by three participants: specifically, Sophie who found that her experience of working with women experiencing losses deeply impacted her marriage and the conversations she had with her spouse. She found that she and her partner had differing views surrounding whether to carry a pregnancy with complications to term, a conversation that she initiated after working with a woman who experienced a loss while at work.

That isn't something you talk about before you get married like, "Hey, if we have a baby that is going to have an issue are we going to terminate or are we going to choose to carry it to term?" But it is a fundamental thing that if you don't like to feel the same way, it could really cause a lot of problems. Something that I actually discovered was that we didn't feel the same way after I had a case at work during my second pregnancy, and it actually made me not want a third pregnancy. I just had seen it very close hand in my second pregnancy, so it was one of the factors that made me feel like I didn't want to have another baby. (Sophie)

It appeared that the identity of being an L&D nurse was all consuming—It was present in the conversations and decisions between a woman and her partner leading up to and during

childbirth, it was present in the teaching her partner receives, and it was present in the unspoken understanding between a pregnant nurse and her co-workers.

Bonded By Birth

Explored in this sub-category is the bond formed between L&D nurses and their patients through the shared history of pregnancy and childbirth, leading to changes in professional practice after an L&D nurse transitions to mother. Indeed, whether a nurse is a mother herself is something labouring patients ask, as it appears they seek this shared connection:

> *Before I was pregnant, patients constantly asked, "Have you had a baby" or "Are you pregnant?" You felt like you were losing points if you hadn't had a baby yet. When I was pregnant, I felt like I was more respected as a nurse because they could relate to me. I remember before I had kids when I said no, they were like, "Oh you don't know," as if I'm not credible as a nurse. (Sophie)*

As Sophie described, credibility in the eyes of the patient may be linked to whether a nurse has experienced her own labour. Others echoed this finding:

> *When people asked me before I had children, they were asking me like, "Do you even know what you're doing?" It used to be an immediate divide and now when they ask, and I say I have children, it opens this whole thing, this whole connection. I think it is almost like this motherhood club. I hate saying that because I used to be jealous of the gang and be like, "I want to be a part of this big mom gang, but now I get it." (Rem)*

Thus, the identity of being a mother appears to be important to L&D nurses, as it allows them entry into the exclusive "mom gang." This bond appears to create compassion for one another's situation; indeed, patients may show more empathy towards nurses who work during their pregnancies: *Even with my first pregnancy, people empathised with me like,* "Y*ou must be*

tired being on your feet." *You kind of have this immediate bond; you both chose to have children (Rem).*

Participants in this study also noted that they were more empathetic when they cared for women who shared similar stories to their own:

> *That experience has given me a lot more empathy. I treat those patients differently because I have journeyed through that, I have laboured and then gone for an emergency caesarean section. I've lived that, and I've gone through that, and I understand the feelings of failure and the feelings of frustration or discouragement. (Lucy)*
>
> *It was really unique and eye-opening to have delivered my own baby. You always say to patients like, "Oh good job you're doing; great you can do this blah blah," but having been through it, you can truly say, "YOU can do it!" It's easier having lived it; you can say it more truthfully, even though you've seen it happen a million times. (Halle)*

Yet, there are challenges that may arise due to the personal conversations that occur between nurses and their patients. For Halle, being asked by her patients if she had children made her feel uncomfortable.

> *I think people just noticed right away. Even when I was just starting to show, people would ask, "Are you pregnant" and I would be like, "You aren't supposed to ask me that," but they do. . . . They want to know me too. I think it was just comforting to them just knowing that we were kind of in it together. (Halle)*

Other participants noted how being in situations in a labour room that were similar to their own birth story caused them to flashback to their own experience. Four participants mentioned this, including Lucy, who recalled being back at work after her first delivery, now helping patients push during their own delivery:

I remember encouraging patients to push, and I had to cross my legs and hold my knees together because I was remembering the pain of pushing, I think that was very real. I vividly remember standing beside the bed with my legs like crossed and just wincing as this woman was pushing, and I was like, "Yea keep going you can do it." Meanwhile, I am like oh that looks like it hurts so bad, and I could almost FEEL that pain down there again, as she was going through that.

These participants also expressed how their practice changed because of their own birthing experience. Every participant in this study shared that because of her own pregnancy and birth experience, she viewed her practice in a new, positive light:

Since I've had babies, I have remembered the nurses, I remember the doctors, I remember everything about those days, so I feel like being a L&D nurse and helping women in these situations is one of the most beautiful things. As a mom, sometimes your days are exactly the same, you get your kids up, you wash things, you do laundry, and you do it all over the next day. . . . I feel like I never make a huge difference in their life, but L&D, for the rest of their life, your patients are going to remember this day. They will remember how the doctors were, how the outcomes were, how they felt about their experience, and I love that. I love that because I remember that. I know how much of a difference my nurse made to me. (Tatum)

It also appears that respect for their colleagues grows after an L&D nurse goes through her own birth experience:

I remember how much of a difference the nurses and the doctors made for me, and I love being that for other patients. You are just so much more aware that this patient is going to walk away feeling a certain way about you, and I know it now. They will think about

you for the rest of their life, and I now understand that. It's way more of an important job than we even think it is, even for the long-lasting impact. (Rem)

The participants in this study seemed to feel that nurses working in L&D are perceived differently when patients learn the nurse has experienced her own pregnancy. Patients often ask the L&D nurse questions about their own experience, as they are seeking comfort in knowing if they too belong to "the motherhood gang" and have a shared identity. This can create unique challenges for the L&D nurse; yet, when L&D nurses experience childbirth, it appears they are able to empathize and connect differently with patients. How a nurse's personal practice will change after giving birth may be different for each nurse. A key finding in this study has been that a professional change occurs when a nurse transitions to motherhood.

Summary of Findings

The findings of this study depict an over-arching theme of transformation, indicating that the experience of being pregnant and giving birth is impacted by a nurse's professional identity as she transitions into motherhood. During each stage, a nurse experiences transitional periods impacting how she perceives her body, her co-workers, and her identity as a nurse and mother. As her pregnancy progresses, an L&D nurse must balance her health needs with the needs of her patients, and at times, due to barriers described in the category balancing act, the nurse's health may be held in the balance. Some of the challenges faced by an L&D nurse as she transitions through pregnancy may be lessened due to the support of her co-workers by belonging to the "sisterhood." Yet, with this sense of belonging comes the expectation that a nurse must make the right choices in her pregnancy, leading to added pressure and anxiety for the pregnant L&D nurse.

Ultimately, it appears power dynamics are present, as the right to be autonomous in decision-making is limited for L&D nurses due to the scrutiny of the sisterhood, with possible professional ramifications existing based on the decisions a nurse makes. There also appears to be a cumulative impact from the insider knowledge, relationships, and power dynamics that ultimately shapes the childbirth experience of an L&D nurse. This impact is unique to the nurse as she speaks the nursing language, thus leaving her partner in the dark when it comes to teaching opportunities or decisions made in both childbirth and pregnancy. It appears a nurse's own birth experience changes and shapes her practice after childbirth: she can bond differently with patients and views her practice from a new set of eyes as she has transitioned to motherhood herself: an identity she shares with her patients. Although the transitions through each stage of pregnancy may be slightly different for a nurse through each pregnancy, the act of going through pregnancy and childbirth once leads to the transformative experience of becoming a mother, thus being a complete, unique transformation in itself. Implications from the findings of this study will be discussed in further detail in the following chapter.

Chapter Five: Discussion

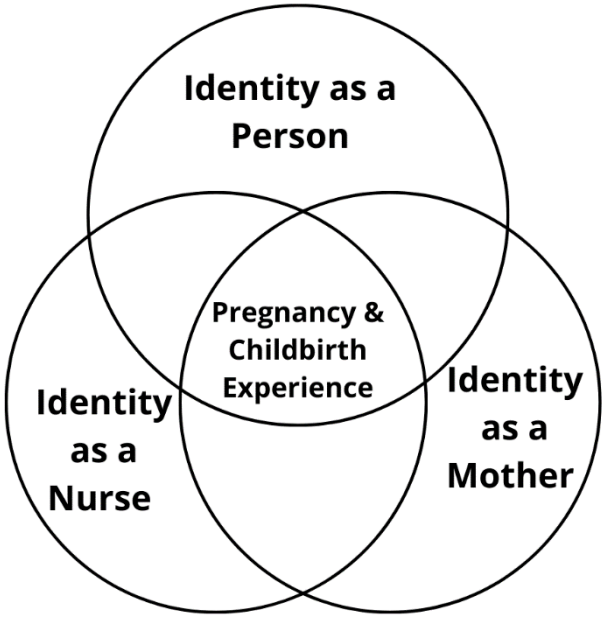
Findings from my study illuminated the experience of being pregnant while working as a nurse on labour and delivery (L&D). The thematic arc of transformation was identified and is supported by three categories, each representing a unique transition that occurs in a pregnant nurse's identity. These three categories were (a) balancing act, (b) the power of the sisterhood, and (c) becoming a mother. In this chapter, I will explore how the major findings and conclusions from my study align, extend, or diverge from the current literature. As previously stated, little is known about the topic of being pregnant while working as a nurse on L&D. The findings of this study provide a starting point for further discussion and exploration of pregnant nurses' experiences while working on L&D and other units as well. In this chapter, I will also discuss implications for nursing practice and education as well as recommendations for future research based on my findings.

Major Findings

The three categories of balancing act, the power of the sisterhood, and becoming a mother represent recurring ideas and core matters of the participants' experiences of being pregnant while working on L&D. These core matters led to the creation of the over-arching theme of transformation; it would seem based on the findings from this study that a woman's transformation of becoming a mother is informed by her personal identity, her professional identity as a nurse, and her emerging identity as a mother. To unpack the theme of transformation, I will explore the constructs of personal identity and mothering identity separately, as well as their intersection with nursing identity, with this intersection occurring during pregnancy and childbirth (see Figure 1). Other concepts and ideas that will be explored in

this discussion related to the over-arching theme of transformation include identity fusion, self-efficacy and moral distress, perception of childbirth, and change in professional practice.

Figure 1: *Constructs of Identity*



Personal Identity

Personal identity can be defined as "a phenomenological sense of oneself as a separate individual being with a distinctive personality and a 'true self' persisting over time; a self-image." (Oxford University Press, n.d., para. 1). Personal, or self-identity, has been studied in depth in the field of psychology (Aartiyer & Tsivrikos, 2010; Sinnott, 2017), with the term self-concept being used interchangeably with self-identity within the literature (Aartiyer & Tsivrikos, 2010; Bailey, 2003). Self-concept refers to how an individual perceives their behaviours, abilities, and unique characteristics; indeed, self-concept is the term used to describe the way in which an individual perceives their own identity (Karakayali, 2021). While historically it was argued that an individual's identity and self-concept were formed in childhood and remained

stable (Karakayali, 2021), recent research has brought forward a different perspective. Sinnott (2017) argued that while some aspects of personal identity and self-concept remain stable over time, prominent changes may occur to personal identity throughout adulthood, and thus, a level of dynamism is present.

How stable or dynamic an individual's identity is appears to be influenced by external factors (Sinnott, 2017). Indeed, associating with a collective group has an impact on a person's identity, as it is believed that individuals try to maintain a stable sense of self or self-continuity over time that aligns with the collective group with whom they identify (Aartiyer & Tsivrikos, 2010). However, at times, this stable sense of self must become more dynamic as new identities are brought in, which may have conflicting values or priorities with their prior identity (Aartiyer & Tsivrikos, 2010; Sinnott 2017). Although my study did not set out to explore personal identity, Aartiyer and Tsivrikos (2010) and Sinnot (2017) provided some context in understanding the experiences of the participants in this study. Findings from my study appear to indicate that a change in personal identity occurs when an L&D nurse becomes pregnant as she seeks to balance her personal identity and her professional identity, which both shift and expand as she embraces her emerging identity as a mother. As previously stated, there is a paucity of research on the experience of being pregnant while working on L&D; therefore, this finding extends the current body of knowledge in this area.

Mothering Identity

What we know about the childbirth experience and the transition of becoming a mother is that it is a social and cultural phenomenon (Arnold-Baker, 2019; Behruzi et al., 2013). Indeed, Liamputtong (2005) stated, "The social meaning of birth is shaped by the society in which birthing women live" (p. 4). Thus, the social aspects of birth, including social support systems,

have an important impact on mothering identity, birth practices, and experiences (Behruzi et al., 2013). Moreover, the emergence of a mothering identity begins early in a woman's pregnancy and is not complete until many months after a woman gives birth (Arnold-Baker, 2019). Indeed, Arnold-Baker (2019) suggested that personal identity is vulnerable during this time as the new identity of motherhood is welcomed. Arnold-Baker (2019) concluded that identifying the childbearing process as a long transitional state, which begins in early pregnancy, is essential and that support needs to be present during all stages of this transition to promote maternal well-being. While support throughout pregnancy is viewed as essential, to my knowledge, my study is the first to explore the social support system present for pregnant nurses who work on L&D and how this system and the professional identity of nursing may inform an L&D nurse's personal birth experience.

Intersection of Nursing Identity, Personal Identity, and Mothering Identity

From this study, it appears that an L&D nurse's professional identity is highly influential on her personal identity, her birth experience, and her emerging identity of mother. This became evident in this study as participants described their professional practice:

> *It is a very different experience being pregnant while working on labour and delivery. It's really strange how certain professions like nursing truly infiltrates every area of your life. It's how you think about things, how you accept news, it's your perspective in everything. (Rem)*

While some authors have described nursing identity as "the values and beliefs held by nurses that guide her thinking, actions, and interactions with the patient" (Fagermoen, 1997, p. 434), my study findings suggest that an L&D nurse's professional identity may have a more widespread influence on an L&D nurse's life. In fact, the intersection of identities may become

more apparent and prominent during the pregnancy and childbirth experience. Thus, a major finding from this study expressed by participants is that personal identity, professional identity, and the emerging identity of mother all intersect during the pregnancy and childbirth experience, creating changes amongst all three identities.

This co-existence of identities is not without tension. Indeed, participants described how as they transitioned from nurse, to patient, to mother through their pregnancy experience, they willingly, and un-willingly, brought forward aspects of their professional identity into their experience, which may give rise to identify fusion.

Identity Fusion

Identity fusion is "is a visceral sense of 'oneness' with a group and its individual members that motivates personally costly, pro-group behaviors" (Swann & Buhrmester, 2015, p. 52). Within my study, there are two groups with whom a pregnant nurse appears to be vulnerable in experiencing identity fusion: (a) co-workers because of their shared connection of L&D nursing, and (b) patients due to their shared connection of pregnancy.

Relationship Between Nurses. The relationship between L&D nurses and their co-workers was present in this study as described in the category The Power of the Sisterhood, where participants shared how this relationship was "like sisters," which is rooted in trust, connection, and loyalty. The strength of the relationship between coworkers was noted by multiple participants, including Rem, who stated:

> *When you develop those strong relationships with people, they are going to take care of you in a way. . . . That's your BLOOD, that's your KIN, you feel very connected to that person.*

Because of this connection, participants shared how they were able to discuss "*taboo*" topics with co-workers. This included discussion of their own personal experiences of miscarriage or treatments for infertility. These conversations were perceived by the participants as being supportive of their own well-being. Moreover, multiple participants in this study shared news of their pregnancy with co-workers early on in their pregnancy. For example, June recalled sharing her pregnancy with co-workers when she was only 4-5 weeks pregnant. Early recognition and discussion of a woman's pregnancy may be supportive to a woman's well-being and the fostering of her mothering identity as she transitions through pregnancy (Arnold-Baker, 2019). Thus, this finding highlights a potential benefit for a pregnant L&D nurse, which derives from the social support system of L&D.

Yet, there appears to be another side of this relationship: one with potential negative implications on the well-being of L&D nurses. This is seen in the sub-categories The Scrutiny of the Sisterhood and Pressure to Perform. Indeed, pressure from colleagues was prevalent in this study. Participants shared how their professional knowledge and relationships impacted which doctor they saw, where they chose to deliver their baby, questions they asked (or felt they were unable to ask) their physician, and whether or not they accessed non-routine care. For example, professional influence was evident on personal decision-making for Tatum, as she recalled how she delivered her previous children at an urban location out of fear of what other nurses might say if she chose to deliver at a rural location. With her third pregnancy, Tatum chose to deliver her baby at a rural location, and unfortunately, as she had feared, she was met with criticism by other nurses.

Criticism from co-workers on personal decisions made by pregnant L&D nurses was a major finding in this study. This was further evidenced by participant Beth, who described how

choosing the nurse who would support her in pregnancy may be beneficial to other nurses, but for her, this decision was difficult. She described how she struggled with the criticism she received when she made her decision:

> *I think it's hard for choosing your nurse. When you come in, they say, "Pick who you want your nurse to be." That for me is so hard because I don't want anyone to feel like I don't want them. Someone made the comment, "Oh, like you didn't want me to be your nurse? Or why would you pick her?" (Beth)*

Another example of how relational dynamics of L&D may impact a nurse's well-being was described by participant Sydney. Sydney stated how she felt unsupported at work when she was pregnant, which she attributed to the fact that she was a casual employee. When she felt she needed more rest, she was met with the response by co-workers: *"Well if you can't do the job…."* Indeed, this minimizing of Sydney's concerns is another example of covert hostile behaviours that may occur on L&D units.

Moreover, Rem recalled how she experienced *"pressure to perform well"* in her labour. This pressure seemed to be born out of gossip amongst nurses, as the participants had shared how they knew intimate details of one another's delivery and who was or wasn't a "*wuss*" in labour. It appears that because of conversations amongst nurses about one another's deliveries, a standard was created as to what makes a good labour and a good patient, thus creating pressure on L&D nurses to make choices and behave in a way that align with this standard:

> *I wish someone would have given me the advice to snap out of it. This is your pregnancy, it isn't a group decision and to not care about how someone may talk about it, about who you go to, and the choices you make. It is a very different dynamic to be pregnant and work on a unit where you are all consumed by it. (Rem)*

As described, the "group" nature of personal decision-making may have left participants feeling obligated to make decisions that aligned with the group norm out of fear of alienation and gossip. Although it does not appear actions such as this were overtly, or even purposefully, executed against L&D nurses, it does suggest that participants in this study perceived a loss of autonomy because of the relational dynamics of L&D and the presence of covert hostile behaviours, such as gossiping and criticism. Indeed, it appears that the professional identity of nursing may at times over-shadow a woman's emerging identity of mother.

Relationship Between Nurses and Patients. Other relational dynamics were evident in this study, such as the strong connection between patients and nurses. This aligns with the current research on nurse–patient relationships as evidenced through the concept of mutuality, a term that is recurring in L&D research (Elmir et al., 2017; Halperin et al., 2011). The term mutuality refers to the deep, shared connection between obstetrical care providers and patients, and it highlights the reciprocal nature of the nurse–patient relationship on L&D—a nurse is required to give pieces of herself to her patients to establish this deep relationship (Halperin et al., 2011). This concept is relevant to my study, as participants spoke of feeling a sense of duty to provide patients with high-quality care regardless of the personal cost, including performing physically demanding tasks. Participants in this study expressed performing self-sacrificing behaviours, with specific risk of injury being present during emergency procedures, such as when a pregnant nurse is preparing someone for an emergency caesarean section or when a nurse performs maneuvers to dislodge a shoulder dystocia. For example, Beth recalled:

> *I remember one time one of the doctors said, "You shouldn't have to do that," but at the same time, in that situation, sometimes you are the only one that is there and has that*

experience and can do that. In that instance, you just do, you just naturally do what you are supposed to do to care for your patient, whether you are pregnant or not.

Moreover, participants described feeling inclined to share intimate details of their own lives to cultivate a nurse–patient relationship, including being asked by patients about the nurse's own personal pregnancy and childbirth experiences. This occurred for Halle. When patients asked her about her personal pregnancies, she stated how she recalled thinking to herself: *"You aren't supposed to ask me that,*" yet she stated she understood that patients were seeking to create a relationship with her: "*I think it was just comforting to them just knowing that we were kind of in it together.*" Because of this perception, she shared details of her own life with her patients to facilitate the nurse–patient connection.

Based on these findings, it appears that the importance of the nurse–patient relationship observed in my study and in other nursing literature (Elmir et al., 2017; Halperin et al., 2011) is in alignment with the relational-ties principle of identity fusion. This principle suggests that strongly fused individuals care about one another deeply and may be inclined to engage in self-sacrificing behaviours for the service of others whom they identify with (Swann & Buhrmester, 2015). Bonds that promote identity fusion are often developed and escalated in situations of psychological arousal (Swann & Buhrmester, 2015), which is present when working as an L&D nurse (Beck & Gable, 2012). Thus, due to the deep connections between nurse and patient and nurse and co-workers, the physical and emotional well-being of pregnant L&D nurses may be negatively impacted at times because of the self-sacrificing behaviours that may occur with the intersection of her identities.

Self-Efficacy and Moral Distress

The concepts of self-efficacy and moral distress are also relevant to this study's findings and the discussion of intersecting identities. Self-efficacy refers to beliefs in one's own capabilities to perform the necessary actions to produce the required results (Manojlovich, 2005), whereas moral distress is defined as knowing the right course of action but being unable to pursue the required course of action due to external restraints (Jameton, 1984) These concepts have been well-documented within the nursing literature (Austin et al., 2005; Jameton, 1984; Morley et al., 2020) and align with the findings of my study. This was evident as participants described experiencing a limitation in self-efficacy, resulting in moral distress, when they were unable to perform professional duties due to their growing girth. For example, Halle described an inability to contort her body into the required position to care for patients. When this occurred, participants described how co-workers often supported them by assisting with the pregnant L&D nurse's patients. While this support was appreciated by some, others, such as Tatum, described being frustrated with this assistance:

> *I did find that people would kind of treat you, like, "Oh, you can't do that you're pregnant," or "Oh don't do that you're pregnant," but I was fine, and I wanted them to treat me like I was fine. (Tatum)*

Indeed, in this moment, it appears that Tatum's frustrations may have derived out of a limiting of self-efficacy, and thus, resulting moral distress because of her co-workers' limiting her ability to perform her nursing duties. Moreover, other participants recalled being physically limited in their ability to run to emergency events due to their personal pregnancy. This led to participants experiencing feelings of loss of self-worth, shame, and guilt, which are associated with moral distress and a limiting of self-efficacy (Morley et al., 2020). Specifically, this was

noted by participants, such as June, who expressed feeling *"useless"* when she was unable to assist co-workers who were *"relying on [her]"* for assistance.

In the sub-category Organizational Barriers, moral distress was again described by participants as they recalled how external organizational constraints, such as lack of staffing, high unit acuity, and inadequate education, left charge nurses to assign pregnant nurses to care for patients who were experiencing a fetal demise. When this occurred, participants described being unable to separate their professional experience of caring for women experiencing loss from their personal pregnancy. For example, Sydney recalled her experience following caring for a patient who was the same gestation as her and who was experiencing a fetal loss:

> *The charge nurse had apologized about assigning me to them. I agreed to it because there wasn't really another option. I didn't think it was going to be as upsetting as it was. . . . It was very upsetting when the baby was delivered. . . . You know, it's hard enough on a good day, but when you are pregnant, and they are too, I kept thinking, "That is the size of my child. What if...?" (Sydney)*

Moreover, in order to protect patients' well-being, participants described how they tried to hide their personal pregnancy in order to prevent patients from seeing their "*belly full of hope*" as they cared for patients experiencing great loss. For example, Beth recalled her emotionally challenging experience of caring for a woman who was experiencing a fetal demise when she herself was visibly pregnant:

> *To walk back into that room with my pregnant belly and her looking at me like "and my baby is gone," I think that is what is hard, when you have people who are going through losses or traumatic things and here you are . . . pregnant. (Beth)*

Thus, to protect patients, pregnant nurses are often not assigned to patients who are experiencing a fetal demise; however, this is not always possible if L&D units are not adequately staffed, leading to potential negative implications on well-being for both patient and the pregnant L&D nurse. Inadequate staffing and high unit acuity have been well-documented barriers to providing patient care in obstetrical healthcare research (Beck & Gable, 2012; Creedy et al., 2014; Wright et al., 2018), however, the findings of my study bring forward some of the unique staffing considerations and potential negative mental health outcomes that may occur for nurses who work on L&D while pregnant.

Perception of Childbirth

It is not only pregnancy that is impacted by a nurse's professional identity. The implications of the intersection of professional identity, personal identity, and the nurse's emerging identity of mother continued into her own birth experience. Research supported how memories of childbirth remain strong even 10 years after the birth experience (Takehara et al., 2014). Yet, when I asked participants in this study to recall their childbirth experiences, they brought forward both personal and clinical nursing knowledge of their own childbirth experience. This was evident in the category becoming a mother, where participants explored how they "*nursed themselves*" through their birth experience. Indeed, the majority of participants in this study reviewed and interpreted the fetal heart rate monitor during their delivery, stating that they "*couldn't let go*" of their nursing knowledge as they transitioned to being a mother. Using this professional knowledge, inferences were made about the plan of care throughout the nurse's pregnancy and birth experience:

> *When you're monitoring a mom and you hear the decels on the monitor, your brain registers it. So anytime my son had a decel, I registered it. I knew exactly what that was,*

and I tried to figure out "Was that with the contraction or was it not?" Most were not with contractions, so that was nurse me being triggered. (Bea)

Thus, for Bea, as well as other participants, there was increased anxiety during their own childbirth experience because they could not let go of their professional knowledge and identity. This again highlights how dominant the nursing identity is, and that at times, it may compete with a woman's emerging identity of mother.

Participants also expressed that their partner's experiences of pregnancy and childbirth were impacted because of their professional identity. For example, participants described how their partners were not often involved in teaching moments: specifically, participants brought forward how partners were not present or involved in pre-op appointments, and even when they did attend, teaching directed to the partner was often not provided. Rem shared how she acted as "interpreter" for her husband following obstetrical appointments. Thus, there appears to be an added responsibility for pregnant nurses who work on L&D to act as teacher to their partners, as little teaching is provided by co-workers for the pregnant nurse's partner during pregnancy and childbirth. This appears to be due to the unspoken understanding of nursing knowledge between the nurse providing care and the nurse who is delivering a baby, leading the partner being excluded from teaching moments during the pregnancy and birth experience. Although this is likely not intentional, this further reinforces the primacy of the nursing role, even when the nurse is taking on the mother role.

A Change in Professional Practice

After childbirth, when a nurse returns to work, she is welcomed into the *"motherhood gang*" as patients learn of her new identity of mother. As previously described, personal identity is dynamic and evolves as a person embraces new support systems and belongs to new collective

groups, such as that of the *"motherhood gang"*. Because of this new identity of mother, her nursing practice also evolves and changes. Indeed, it appears that after a nurse has given birth herself, she is able to empathize more authentically and deeply with her labouring patients due to their shared bond of motherhood. For example, participants recounted how they were able to coach patients in labour in a new way after their own childbirth experience:

> *You always say to patients, "Oh good job you're doing; great you can do this blah blah," but having been through it, you can truly say, "YOU can do it!" It's easier having lived it; you can say it more truthfully, even though you've seen it happen a million times. (Halle)*

Moreover, participants shared how their perspective of their profession had changed in a positive way, as they now recognized the instrumental role that they play in a woman's childbirth experience. Indeed, participants shared that it was *"a more important job than [they] ever realized"* and how they now understand the *"lasting impact that [their] care has."*

While it is well documented that there is a strong connection between those who share the identity of mother and that this impacts personal identity (Arnold-Baker, 2019; Behruzi et al., 2013), this finding affirms that a change in nursing identity and practice may also occur for L&D nurses once they have given birth and returned to practice.

Summary of Major Findings

As there was a paucity of literature examining the experience of being pregnant while working on L&D, the findings of this study have extended the current knowledge base by highlighting the unique influences that working as a nurse while pregnant on L&D has on personal identity, professional identity, and mothering identity. It appears that nurses who are pregnant and working in L&D are at risk of negative emotional consequences due to the caring

nature of their work. As discussed, during pregnancy, nurses may experience identity fusion and a limiting of self-efficacy, resulting in feelings of shame, guilt, and loss of self.

Moreover, during their childbirth experience, the participants in this study were unable to separate their professional knowledge from their personal birth experience. This was reinforced by nursing relational power dynamics, which remain present even during a nurse's own delivery. While there appears to be comfort in delivering amongst those whom a nurse has a personal relationship with, with this comes potential scrutiny and fear of not making the "right" choice in the eyes of co-workers. In addition, during the birth experience, the partner of the labouring nurse appears to be isolated due to lacking nursing knowledge, which leaves the burden of teaching to the nurse who is giving birth.

The findings have also suggested that the cumulative experience of being pregnant and transitioning through childbirth informs the nurse's personal identity, including her identity as mother and her professional identity, as she returns to work and views her profession from a new lens. It appears nurses are able to bond differently with patients once they have given birth themselves, which was often viewed as beneficial by nurses in this study. Thus, the return to practice and embodiment of these three now-changed identities (i.e., personal, professional, mothering) captures the transformation of becoming a mother in its entirety as a new, changed woman, and therefore, a changed nurse returns to practice.

These findings demonstrate that working as a nurse while pregnant on L&D alters a nurse's experience in her pregnancy, in her childbirth, and in her return to practice. Thus, it is important to understand how to support a woman working on L&D while pregnant to mitigate potential detrimental occurrences. The implications for nursing practice from these findings will now be discussed.

Implications for Nursing Practice

Every participant in this study described a physical and psychological impact on their well-being during their pregnancy due to their employment on L&D. As a result, I believe there are specific implications for nursing practice that need to be addressed and discussed and specifically related to these areas: (a) patient assignments, (b) staffing concerns, (c) nurse debriefing, and (d) addressing the potential for horizontal violence.

Patient Assignments

There was a scarcity of research on how patients are assigned to nurses, specifically to nurses who work on L&D. Without these data, it is difficult to put into place practices and policies to protect the well-being of nurses who work on L&D, particularly when the nurse herself is pregnant. My study is the first study I know of that brings forward the implications of patient assignments for nurses who work on L&D while pregnant. Importantly, the participants described how a thoughtful patient assignment is beneficial to a nurse's mental and physical well-being and also to patient well-being, especially if the patient in question is experiencing a fetal demise.

Zwerling et al. (2021) explored the phenomenon of being an L&D nurse who cares for a patient experiencing a fetal demise. They described how nurses feel an emotional, logistical, and moral burden when caring for patients who are experiencing a fetal demise. The findings from Zwerling et al.'s study aligned with my findings by depicting how nurses internalize the trauma experienced by their patients. Indeed, in both my study and Zwerling et al.'s study, participants shared similar struggles, such as difficulty in maintaining boundaries and feeling inadequate in their ability to perform nursing care due to staffing shortages and high unit acuity. To add to Zwerling et al.'s findings, the findings of my study suggest that there is an intersection of

personal, professional, and mothering identity for nurses who work while pregnant on L&D, which negatively impacts the nurse as she struggles to separate her personal pregnancy from her patient's loss. Thus, this has highlighted that being pregnant while working as a nurse on L&D adds to the emotional burden for nurses who work on L&D. Zwerling et al. offered suggestions to nursing practice, which are valuable to my population of pregnant nurses working on L&D. Specifically, Zwerling et al. suggested that as a healthcare organization, we must acknowledge the cost to nurses emotionally, physically, and logistically of providing one-to-one nursing care to patients who experience fetal demise. Zwerling et al. suggested that to address this impact, interventions need to be instituted. They recommended interdisciplinary simulation to increase feelings of competency when providing care to women experiencing a fetal demise as well as improving staffing to allow for more time for compassionate care.

To support pregnant L&D nurses' well-being, I recommend educating nurses on how to support patients who experience a fetal demise as well as how to support nurse co-workers who are involved in traumatic deliveries. A specific example of this would be including formal debriefing into L&D nursing practice, which will be explored in further detail later in this section of this thesis. By endorsing education and support, including funding for adequate staffing on L&D units there is a potential to mitigate some of the negative experiences noted in my study and increasing retention of nurses on L&D.

Staffing Concerns

To provide adequate support for nurses, there must be adequate staffing on L&D units. In the *Fetal Health Surveillance: Intrapartum Consensus Guideline* (Dore & Ehman, 2020), the Society of Obstetricians and Gynecologists of Canada recommended one-to-one nursing care for all patients in active labour, recognizing that the nurse is actually caring for two patients: mother

and fetus. Unfortunately, there currently is no Canadian guideline outlining in detail when one-to-one nursing care is needed for situations that do not meet the "active labour" criteria (Raby et al., 2005). Therefore, to ensure adequate staffing for nurses who work on L&D in Canada, it may be beneficial to utilize sections of the American guidelines addressing staffing on L&D units. AWHONN created the *Guidelines for Professional Registered Nurse Staffing for Perinatal Units* in 2010, which was updated in 2020, with this guideline providing recommendations for when one-to-one nursing is needed for unique situations, including antenatal considerations. An example of this is when a woman is receiving intravenous magnesium sulphate. The AWOHNN guidelines also provide recommendations on how to improve staffing on L&D units, which may be applicable to the Canadian setting. For example, one recommendation is to have a contingency plan in place for when staffing is inadequate. This contingency plan includes having an on-call system in place, as well as delaying all elective procedures (elective caesarean sections, inductions) until adequate staffing is present to allow for patient safety and one-to-one nursing care.

While the AWHONN (2010) guidelines may help inform the creation of a guideline specific to L&D unit staffing in Canada, there was a paucity of research into staffing on L&D units in Canada. That said, I was able to locate only two studies examining adherence to the AWOHNN staffing guidelines in the United States. In their research, Scheich and Bingham (2015) found that 33% of hospitals adhered to staffing guidelines of one-to-one nursing when a woman was receiving an oxytocin augment. Simpson et al. (2019) reported 66% adherence. Similarly, when there was one nurse to one woman with minimal to no pain relief during labour, 38% were adherent (Scheich & Bingham, 2015). Moreover, Simpson et al. (2019) found that hospitals with annual birth volumes of greater than 2,500 were less likely to follow nurse staffing

guidelines. Although these studies were conducted in the United States using the AWOHNN staffing guidelines, it is possible that adherence to the recommend one-to-one continuous labour support is equally as low in Canada.

Thus, more focus is needed on staffing L&D units in Canada. Without adequate staffing, one-to-one support may not be present for patients, let alone enough staff to support thoughtful patient assignments for nurses who are pregnant while working on L&D. My suggestion would therefore be to create a Canadian Staffing Guideline using the AWHONN (2010) staffing guidelines for reference. Once this guideline is created, to incentivize the use of this guideline, it would be beneficial to institute a formal staffing policy using the Canadian guideline as a reference for hospitals experiencing staffing shortages. This policy could be developed based on feedback from floor L&D nurses, thereby promoting buy-in from L&D nurses as they feel their concerns have been heard, which may increase adherence in following this policy once created. As a result of this, there may be an increase in staff availability, allowing for charge nurses to appropriately assign nurses who are pregnant to patients on L&D units.

Debriefing for Nurses

Ongoing education is needed for nurses who work on L&D to improve coping when working with patients who experience a fetal demise. Most research focused on perinatal loss was focused on the perspective of the woman experiencing the loss (Armstrong et al., 2009; Bennett et al., 2008); however, emerging research, including my study, has highlighted the emotional trauma of working as a nurse on L&D (Willis, 2019). To lessen the emotional trauma of working on L&D, including for nurses who are pregnant, it would be beneficial to include formal debriefing in nursing practice.

A case study analysis by George (2016) utilized Schwartz Rounds as a means of support for the multidisciplinary team, which included nurses. The aim of Schwartz Rounds is to reinforce the importance of human connection by providing staff with structured, uninterrupted time to reflect on practice (George, 2016). This is done by trained facilitators who encourage staff to reflect on their thoughts, feelings, and actions rather than attempting to solve problems (George, 2016; Taylor et al., 2018). I believe Schwartz Rounds may be an appropriate method of facilitating debriefing for nurses who work on L&D, including for L&D nurses who are pregnant. Indeed, in their systematic review, Taylor et al. (2018) found that Schwartz Rounds were viewed as beneficial by healthcare staff because they allowed for discussion of the emotional impact of providing patient care, which may be valuable for the population in my study. Moreover, according to George (2016) attendance at Schwartz Rounds helped staff feel less alone when experiencing stress and resulted in increased compassion towards co-workers and themselves. Although the benefit of Schwartz Rounds has not been studied in relation to the specific group of pregnant L&D nurses, this may be a beneficial first step that could be taken to alleviate the potential emotional distress experienced by pregnant L&D nurses as well as L&D nurses as a general population. Moreover, Schwartz Rounds have been found to be beneficial in reducing horizontal violence (George, 2016), which may be beneficial for L&D nurses who are pregnant, as it may reduce some of the negative aspects of working while pregnant, such as the covert hostile behaviours noted in this study.

Addressing the Potential for Horizontal Violence

Horizontal violence appears to be prevalent in high-stress areas such as intensive care units, emergency rooms, and L&D units (Alspach 2008; Reynolds et al., 2014). Horizontal violence in nursing is defined as any "hostile, aggressive, and harmful behavior by a nurse or a

group of nurses toward a co-worker or group of nurses via attitudes, actions, words, and/or other behaviors" (Thobaben, 2007, p. 83). This includes both overt and covert behaviours of hostility, including belittling gestures (e.g., eye rolling, dismissing, name calling), gossiping, failing to respect privacy, and ignoring or minimizing another's concern (Hastie, 2022; Walrafen et al., 2012). While at times supportive care from co-workers was present in my study, there also was evidence of covert behaviours of hostility as described in the category the power of the sisterhood. Examples noted in this category include gossiping, criticism, failing to respect privacy, belittling, and withholding support. Specifically, examples of belittling and criticism were described by Tatum, as she shared her decision to deliver at a rural location, by Beth, as she described choosing her nurse for labour, and by Rem, as she described feeling pressure to make choices that align with the "*standard*" of a good birth.

Evidence of horizontal violence can be found in the current body of knowledge related to L&D nursing. Reynolds et al. (2014) measured the presence of horizontal violence through a hostility index for nurses who work in women's health and found that L&D nurses had the highest hostility index of 40.88, while Mother Baby nurses had an index of 37, and the Antepartum/NICU/Nursery group had the lowest index of 30.79. Reynolds et al. also found that new nurses are more likely to be the victims of horizontal violence, which is relevant to my study, as women of childbearing age are likely to be newer to the profession of nursing. The high rates of horizontal violence in L&D compared to other areas of women's health were believed to be due to the high stress and high acuity workload of L&D, which is again consistent with the findings of my study.

Strategies to address and mitigate the potential for horizontal violence include offering educational seminars on horizontal violence (Hastie, 2022) as well as recurring professional

training on ethics of care for obstetric health providers (Perera et al., 2018). Moreover, as power structures and relational dynamics are present within nursing (Kim et al., 2020), the use of impartial medical boards with nurse members that receive and review complaints is important (Perera et al., 2018) to not perpetuate feelings of powerlessness.

Making horizontal violence known, however, is the first step to reducing horizontal violence (Walrafen et al., 2012), yet, at this time, horizontal violence is not commonly discussed in relation to nurses who work on L&D while pregnant. As stated by one participant, *"It's something we don't openly talk about, but it is an underlying thing."* It is my hope that by bringing forward the findings of this study, we can make the necessary changes to nursing practice to expose the potential for horizontal violence on L&D units, thereby reducing its presence.

Implications for Nursing Education

Reducing horizontal violence is essential for promoting health and well-being for both nurses and patients (Reynolds et al., 2014). Covert behaviours of horizontal violence, such as belittling, gossiping, and failing to respect privacy, comprised a predominant finding in this study, with research supporting that horizontal violence begins to be present even as a student nurse (Curtis et al., 2007). Curtis et al. (2007) found that 51% of nursing students experienced or witnessed horizontal violence in their nursing practicums. Curtis et al. concluded strategies to reduce horizontal violence within the nursing profession include teaching assertiveness and conflict resolution skills to students within nursing programs. I believe this strategy would begin to address the findings from my study; having improved conflict resolution skills may allow nurses to experience a sense of autonomy and power while working on L&D.

Another strategy that may be beneficial for reducing the incidence of horizontal violence is promoting nurse engagement in interdisciplinary studies or courses. For example, Alberta Health Services (2020) offers a course through the Royal Alexandra Hospital titled "Team-Based Interdisciplinary Training for Obstetrical and Gynecological Staff." This course includes multiple disciplines, such as obstetricians, midwives, and family physicians, with the objectives of this course being to reduce maternal, newborn, and women's morbidity and mortality during emergency situations. As previously stated, one of the reasons the incidence of horizontal violence appears to be higher on L&D units is because of the high-stress nature of this work area. Perhaps by attending courses such as the one noted here, communication between disciplines can be improved, which may lower the incidence and reduce the potential for horizontal violence.

While I have provided suggestions on how nursing education can be improved to support the well-being of L&D nurses, as previously stated, little research has been conducted specifically on L&D nursing. Thus, more research into this population is warranted.

Recommendations for Future Research

From this study, I identified that the experience of being pregnant while working on L&D is unique and impactful to an L&D nurse, both personally and professionally. Thus, there is a need for more investigation into this unique population to promote retention of L&D nurses and enhancement of physical and emotional well-being for L&D nurses, including when they are pregnant. Further questions became apparent during this study. Specifically, I wonder what policies and interventions can be put into place to guide management, physicians, and charge nurses in ensuring the well-being of L&D nurses who are working while pregnant? For example, Schwartz Rounds was discussed in the nursing implications section of this paper as being a tool

that could be used in debriefing, and it would be valuable to assess effectiveness of a debriefing tool such as this specifically for pregnant nurses who work on L&D.

The burden of having L&D nursing knowledge was a major finding from this study, as nurses appeared to struggle to let go of nursing knowledge during their childbirth experience as they transitioned to motherhood. However, this study was conducted on a small scale by only involving two hospitals, one small urban centre and one rural site. Therefore, it would be beneficial to study other hospitals on a larger scale to see if these findings are universally applicable. I recommend that more research is done examining the subjective childbirth experience of being a nurse who works on L&D, as this is a population that had little voice in the literature, and yet, from this study, it is evident that the transformation of becoming a mother and the memories of childbirth for a woman who works on L&D are clouded by fear, anxiety, and the burden of her nursing identity.

The concepts of identity fusion, self-agency, and moral distress appear to be relevant in the discussion of being a pregnant nurse working on L&D. However, these concepts have not been directly studied in relation to this population. Therefore, I recommend that more research be conducted on these concepts on the specific population of being a pregnant nurse working on L&D.

It was identified that partners of L&D nurses also have a unique experience during pregnancy and childbirth due to their partner's expert knowledge on childbirth, and therefore, it would be interesting to hear the partner's perspective. Perhaps this understanding would allow for more communication and teaching for partners of women who work on L&D while pregnant. Strengthening teaching to partners may alleviate the burden of teaching and interpreting healthcare language for pregnant L&D nurses.

Outside of the current recommendation from the Society of Obstetricians and Gynecologists of Canada of one-to-one nursing in active labour, as noted in the *Canadian Fetal Health Surveillance: Intrapartum Consensus Guidelines* (Dore & Ehman, 2020), there currently is not a comprehensive guideline in Canada focusing specifically on staffing on L&D units. Therefore, it may be beneficial to conduct further research on L&D units in Canada to see if the creation of a staffing guideline would assist with staffing concerns on L&D units, which were identified in this study. From this research, it may be determined that the creation of a guideline that outlines in detail when one-to-one nursing is needed that is broader than the current recommendations, and includes ambiguous scenarios, such as antenatal care, would be beneficial. It appears from my findings, as well as others included in this paper, that lack of staffing increases the stress of working on L&D, with unique negative implications on well-being for pregnant L&D nurses. Because of this, lack of staffing may promote nurse attrition from L&D, which may decrease general fetal and maternal health and well-being.

Conclusion

My study began selfishly—I wanted to understand what it was like to be pregnant and work on L&D so that I was prepared to work as a nurse on L&D during my own future pregnancies and so that I was able to support co-workers throughout their pregnancy and childbirth experience. I have personally seen high rates of nurse attrition from L&D due to the emotional and physical demands of this career. This high rate of attrition is supported in current research on L&D nursing globally (Beck et al., 2015; Wright et al., 2018), and it is predicted that there will be an increase in a shortage of nurses in Canada in the near future (Nowrouzi et al., 2015). Therefore, it is prudent that we understand the needs of L&D nurses and how to support retention of these skilled healthcare providers, including when they are pregnant. Yet, the

subjective voice of L&D nurses was lacking in the current body of literature. Although this study began selfishly, the findings from my study and the analysis of the findings were not done with a selfish intent.

Main findings from my study illuminated that the transformation of becoming mother is influenced by a woman's profession as an L&D nurse. Indeed, it appears her personal and professional identity intersect with her emerging identity of mother. The findings suggest that the influences of professional identity and practice are woven through an L&D nurse's recollection of her own pregnancy and birth experience, ultimately informing the choices she makes in her own birth experience.

While the identity of being a nurse informs a woman's journey to motherhood, so too does a woman's identity as mother inform her professional practice as a nurse as explored in the category bonded by birth. Thus, I believe this study has highlighted the importance of recognizing that there is an intersection of identities for nurses who work on L&D, specifically for nurses who are pregnant. Because of this, this population is uniquely vulnerable to some of the negative aspects of working in this area, such as working with women who experience loss or being subjected to covert hostile behaviours, and thus horizontal violence.

To support nurses who work in this area while pregnant, specific implications for nursing practice were discussed in this study, including altering patient assignments, improving staffing, prioritizing debriefing, and addressing the potential for horizontal violence. Specific recommendations were provided to address these areas, such as the implementation of Schwartz Rounds for debriefing and the creation of an in-depth Canadian obstetrical staffing guideline. While this study did extend the current body of knowledge and offer implications for nursing practice, more research is needed to support this unique and potentially vulnerable population.

We know that nursing has a strong professional identity (Kim et al., 2020); however, this study has extended the knowledge base by offering the subjective perspective of an L&D nurse who is pregnant. Specifically, this study highlighted how influential the identity of being an L&D nurse is on a woman's personal identity, including on her own transformation to becoming a mother. In summary, Rem's comments capture the power and influence of being an L&D nurse on a woman's entire life:

> *As much as I've always said my identity is not a nurse, or mom, or whatever, you can't get away from it. I've learned that truly at the core of it.… My identity is as a L&D nurse. No matter how I expand on other units, or how my life changes, I know my heart is there, on L&D. It's funny, something about it, I don't think I'll ever be able to fully leave that area.… It shaped my whole life because of those moments on L&D …. their moments … my moments.*

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Appendix A: Interview Guide - Primparous

1. Tell me about your experiences working as a nurse on labour and delivery while pregnant?

   Probe: How did you manage your personal pregnancy while working? Physically? Emotionally?

2. Did any events occur while you were pregnant and working that were significant to you?

   Probe: Do you believe you reacted to these events differently due to your personal pregnancy? Tell me about them. Describe for me changes in the nurse-patient relationship that you attribute to being visibly pregnant?

3. While working as a RN on labour and delivery while pregnant, were there any actions by co-workers/management/physicians that you viewed as supportive to your well-being? As detrimental to your well-being?

   Probe: What were the most challenging aspects of working on labour and delivery while pregnant? The most positive? Were there any changes in professional relationships due to your personal pregnancy?

4. Because of your experience on labour and delivery, you have unique knowledge of the childbirth experience. Describe for me how you believe this nursing knowledge impacted your childbirth experience, if at all?

   Probe: Are there any specific choices that you can recall making based on your nursing knowledge? Did your own labour and delivery experience change your understanding of the labour and delivery process? Did your nursing knowledge impact how you experienced this pregnancy/childbirth experience with your significant other? If so, how?

Imagine you could give one piece of advice to a nurse who found out she was pregnant while working on labour and delivery… what would it be?

5. How has having a child while working on delivery labour and delivery change your professional practice?

   Probe: Can you provide specific examples? Did your own birth experience influence your decision to return to work?

6. Is there any else about your experience of being pregnant while working on labour and delivery, and your childbirth experience, that you would like to share?

Appendix B: Interview Guide - Multiparous

1. Tell me about your experiences working as a nurse on labour and delivery while pregnant?

   Probe: How did you manage your personal pregnancy while working? Physically? Emotionally?

   Was your experience different with your second pregnancy? Please describe how it was different.

2. Did any events occur while you were pregnant and working that were significant to you?

   Probe: Do you believe you reacted to these events differently due to your personal pregnancy? Tell me about them Describe for me changes in the nurse-patient relationship that you attribute to being visibly pregnant?

3. While working as a RN on labour and delivery while pregnant, were there any actions by co-workers/management/physicians that you viewed as supportive to your well-being? As detrimental to your well-being?

   Probe: What were the most challenging aspects of working on labour and delivery while pregnant? The most positive? Were there any changes in professional relationships due to your personal pregnancy? Describe for me if this change was different in subsequent pregnancies?

4. Because of your experience on labour and delivery, you have unique knowledge of the childbirth experience. Describe for me how you believe this nursing knowledge impacted your childbirth experience, if at all?

   Probe: Are there any specific choices that you can recall making based on your nursing knowledge? Did your own labour and delivery experience change your understanding of

the labour and delivery process? Did your nursing knowledge impact how you experienced this pregnancy/childbirth experience with your significant other? If so, how? Were there any differences between pregnancy/childbirth experiences? Imagine you could give one piece of advice to a nurse who found out she was pregnant while working on labour and delivery… what would it be?

5. How has having a child while working on delivery labour and delivery changed your professional practice?

   Probe: Can you provide specific examples? Did your own birth experience influence your decision to return to work?

6. Is there any else about your experience of being pregnant while working on labour and delivery, and your childbirth experience, that you would like to share?

Appendix C: Letter of Support

University of Lethbridge
Faculty of Health Sciences

4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Phone 403.329.2699
Fax 403.329.2668

http://www.uleth.ca/hlsc

Hello,

As you know by our previous discussions, I am currently enrolled in the Master of Nursing program at the University of Lethbridge. As part of the master's degree requirements, I am conducting a research study under the supervision of Dr. Monique Sedgwick. The aim of my study is to explore the experience of being a pregnant registered nurse while working on labour and delivery. Through this exploration, I intend to gain an understanding of what it is like to be pregnant while working on labour and delivery, and ultimately, how these experiences impact a nurse's personal childbirth experience. It is my hope that by understanding this experience, I can share this knowledge with employers and employees so that they can come to understand how to support pregnant nurses working on labour and delivery. To that end, it is my hope to connect with registered nurses who have had a childbirth experience while working on labour and delivery.

At this stage of the research process, I seek your support as the manager of the labour and delivery unit at this urban location for this research study. I would ask that an administrative assistant send an email with the Letter of Invitation on my behalf to the registered nurses who work on this unit. Would you be able to identify a member of your staff who would be able to send out this letter of invitation I would also like to: (i) affix a recruitment poster in the staff/break room and (ii) attend one staff meeting to present my study to the registered nurses. Registered nurses who are interested in participating will be invited to contact me directly to discuss further details of the study. I will also be available after the meeting to answer any questions.

I intend to conduct individual in-person or videoconference/telephone interviews with people who volunteer to participate in the study. I anticipate the interviews will last approximately 60 to 75 minutes. Interviews will be conducted *off scheduled work hours and at a place off the unit that is convenient for the participant and me.* There will be no disruption in workflow or scheduling because of nurses' participation in this study.

Participation is dependent on the registered nurse's voluntary decision to take part in the study. Participants will be informed of their rights prior to conducting the study including confidentiality, informed consent, and the freedom to withdraw from the study without any repercussion. The participant's identity will be protected and replaced with pseudonyms. No

identifying information will appear in my thesis. No identifying information will appear in the thesis pertaining to the organization or anyone who works within the organization or patient. I will discuss with all participants my ethical responsibilities to CARNA, and each participant will be informed that if any unethical behaviour is shared with me, I will take the appropriate steps to report the unethical behaviour.

All generated information will be kept in a secured cabinet for safe keeping and will be destroyed after five years. Finally, only my supervisor, Dr. Monique Sedgwick (sworn to confidentiality) and I will have access to these materials.

At the end of the study, a final report (thesis) will be written, and results may be shared with other researchers, registered nurses, and health care organizations. Knowledge derived from the study may be used to support registered nurses working on labour and delivery

Thank you in advance for your time. I look forward to your assistance in this research project.

Sincerely,

Megan Reger BN, RN Graduate Student
Faculty of Health Sciences University of Lethbridge
Phone: [phone #]
Email: [email address]

Monique Sedgwick, PhD, RN
Associate Professor

Interim Associate Dean
Faculty of Health Sciences

University of Lethbridge
Email: [email address]

Appendix D: Letter of Support

University of Lethbridge
Faculty of Health Sciences

4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Phone 403.329.2699
Fax 403.329.2668

http://www.uleth.ca/hlsc

Hello,

My name is Megan Reger and I am currently enrolled in the Master of Nursing program at the University of Lethbridge. As part of the master's degree requirements, I am conducting a research study under the supervision of Dr. Monique Sedgwick. The aim of my study is to explore the experience of being a pregnant registered nurse while working on labour and delivery. I currently work as a registered nurse on labour and delivery, and through my employment on this unit I have had the pleasure of orientating numerous staff members from this rural site to obstetrical practice. Therefore, when approaching my study, I felt it would be beneficial to recruit from your site to gain a rural perspective on the experience of being pregnant while working with laboring patients. Through this exploration, I intend to gain an understanding of what it is like to be pregnant while working on labour and delivery, and ultimately, how these experiences impact a nurse's personal childbirth experience. It is my hope that by understanding this experience, I can share this knowledge with employers and employees so that they can come to understand how to support pregnant nurses working on labour and delivery. To that end, it is my hope to connect with registered nurses who have had a childbirth experience while working on labour and delivery at your facility.

At this stage of the research process, I have attained ethical and administrative approval to begin this study, and I now seek your support as the manager of the labour and delivery unit at this rural location for this research study. I would ask that an administrative assistant send an email with the Letter of Invitation on my behalf to all registered nurses who work on this unit. Would you be able to identify an administrative staff member that may do this on my behalf? If so, I would appreciate their contact information by Thursday, February 4th. The letter of invitation that I would ask them to send is attached for your review. I would also like to: (i) affix a recruitment poster in the staff/break room (attached for review) and (ii) attend one staff meeting to present my study to the registered nurses. I intend to place these recruitment posters in the break/staff room on Friday, February 5th, as well as reach out to contacts that I have at your facility at this time. Registered nurses who are interested in participating will be invited to contact me directly to discuss further details of the study. I will also be available after the meeting to answer any questions.

I intend to conduct individual in-person or videoconference/telephone interviews with people who volunteer to participate in the study. I anticipate the interviews will last

approximately 60 to 75 minutes. Interviews will be conducted *off scheduled work hours and at a place off the unit that is convenient for the participant and me.* There will be no disruption in workflow or scheduling because of nurses' participation in this study.

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All generated information will be kept in a secured cabinet for safe keeping and will be destroyed after five years. Finally, only my supervisor, Dr. Monique Sedgwick (sworn to confidentiality) and I will have access to these materials.

At the end of the study, a final report (thesis) will be written, and results may be shared with other researchers, registered nurses, and health care organizations. Knowledge derived from the study may be used to support registered nurses working on labour and delivery

Thank you in advance for your time. I look forward to your assistance in this research project.

Sincerely,

Megan Reger BN, RN Graduate Student
Faculty of Health Sciences University of Lethbridge
Phone: [phone #]
Email: [email address]

Monique Sedgwick, PhD, RN
Associate Professor
Interim Associate Dean
Faculty of Health Sciences
University of Lethbridge
Email: [email address]

Appendix E: Letter of Invitation for Registered Nurses

University of Lethbridge
Faculty of Health Sciences

4401 University Drive
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Phone 403.329.2699
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http://www.uleth.ca/hlsc

Date:

Hello,

My name is Megan Reger I am currently a graduate student in the Master of Nursing program in the Faculty of Health Sciences at the University of Lethbridge. I am conducting a study for my thesis that will focus on the experiences of being pregnant while working as a registered nurse (RN) on labour and delivery. I would like to understand how working in labour and delivery impacts a RN's personal decisions regarding her pregnancy/childbirth experience, and if any changes in professional practice occur due to personal pregnancy. At this time, this topic has not been extensively explored by the academic community, and therefore, it is difficult to say what this experience is like. Because of this, policies and practices to support this pregnant labour and delivery nurses is currently lacking.

I would like to invite registered nurses who have been pregnant and had their first childbirth experience within the last 10 years, and most recent childbirth experience within the last five years while working on labour and delivery to participate in this study. Your experiences and insights are valuable to the research study.

Eligible participants will participate in an individual in-person interview with me (if public health guidelines permit) or through a videoconference or telephone call. With your permission, all interviews will be digitally recorded. I anticipate the interview will last about 60 to 75 minutes. The place and time for the in-person interview will be decided between us. The time for the videoconference/telephone interview will be negotiated as well. I may ask you to participate in a second interview conducted over videoconferencing/telephone. The second interview will take about 15 to 20 minutes. This second interview is to make sure I accurately understand your experience. Interviews will not be scheduled during regular work hours.

Your participation in the study is voluntary. The information you share with me including names and place of employment, will remain confidential. I will not share any personal information in reports, my final paper (thesis), or with your employer. All the information collected during the study will be kept in a locked file drawer in my home and password-protected computer. Only my supervisor, Dr. Monique Sedgwick (sworn to confidentiality) and I will have access to the data.

Although I do not anticipate any risks for participating in this study, intimate conversations may lead to experiencing strong and/or uncomfortable feelings. Therefore, you can stop the interview at any time for any reason. You can also choose to not answer any question I ask.

If you would like to participate, or have further questions please contact me directly at [phone #] [email address]. I will then provide you with further information about the study. If you wish to speak to my supervisor, please contact Dr. Monique Sedgwick at [email address]. For questions regarding your rights as a participant in this research study, you may contact the Office of Research Services at the University of Alberta by phone at (780)- 492-0459 or by email at: reoffice@ualberta.ca.

Sincerely,

Megan Reger RN, BN MN(c)
Faculty of Health Sciences
University of Lethbridge
Phone: [phone #]
Email: [email address]

Appendix F: Recruitment Form

DID YOU WORK ON A LABOUR AND DELIVERY UNIT AS A REGISTERED NURSE WHILE PREGNANT?

I am seeking participants to participate in a study centered on the experience of being pregnant while working on labour and delivery, and the impact of this profession on your personal childbirth experience.

WHAT IS REQUIRED IF I SAY YES?

To participate in this study, I will conduct an open-ended interview lasting no longer than an hour and a half. This will be in person (Covid-19 permitting), by video-conferencing or by telephone. Questions will be asked to prompt reflection of your pregnancy and childbirth experience, but ultimately, this interview is led by you. This interview will be confidential, and any information shared can be retracted at any time in the research process.

This study has been reviewed and approved by a Health Research Ethics Board at the University of Alberta (Pro00105686)

CONTACT IF INTERESTED:

Megan Heyland, RN, BN Phone: XXX Email:XXX	Megan Heyland, RN, BN Phone: XXX Email:XXX	Megan Heyland, RN, BN Phone: XXX Email:XXX	Megan Heyland, RN, BN Phone: XXX Email:XXX	Megan Heyland, RN, BN Phone: XXX Email:XXX	Megan Heyland, RN, BN Phone: XXX Email:XXX	FLOWCODE PRIVACY.FLOWCODE.COM

Appendix G: Business Card

Megan Reger RN, BN

Graduate Student

Faculty of Health Sciences

University of Lethbridge

Appendix H: Participant Informed Consent Form

University of Lethbridge
Faculty of Health Sciences

4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Phone 403.329.2699
Fax 403.329.2668

http://www.uleth.ca/hlsc

Title of Study: A Qualitative Descriptive Research Study Exploring a Registered Nurse's Pregnancy and Birth Experience While Working on Labour and Delivery

Principal Investigator:
Megan Reger BN, RN, Graduate Student
Phone Number: [phone #]
E-mail: [email address]

Research Supervisor:
Monique Sedgwick PhD, RN
E-mail: [email address]

Why am I being asked to take part in this research study?

You are invited to participate in a research study that will focus on your experiences of being pregnant while working on labour and delivery, and how this impacted your personal childbirth experience. This study will involve two locations, with the aim being to explore the experience of being pregnant while working on labour and delivery from the perspective of 6-12 participants.

What is the reason for doing the study?

I am conducting this study with the intent to understand the first-person experience of being pregnant while working on labour and delivery, specifically, the unique impact of one's professional occupation on one's own personal childbirth experience. It is my hope that through conducting this study, I can illuminate the subjective reality of working in this area while pregnant. In addition, I wish to understand how each participant perceives their professional practice after giving birth and explore any changes to practice that occur due to their personal childbirth experience. Through gaining an understanding of what it is like to be pregnant and work on labour and delivery as an RN, I hope to provide the opportunity for policies and guidelines to be created that promote emotional and physical well-being for this population. The results of the study will be written in a report and may be shared with other researchers, registered nurses, and health care organizations

What will I be asked to do?

Participation in this study will involve a face-to-face, (if University of Lethbridge guidelines permit due to COVID-19) video-conferencing, or telephone interview that will take about 60 to 75 minutes. The interview will be audio-recorded with your permission, and video-recorded if the interview is conducted via video-conferencing with your permission. If you do not wish to be video-recorded, you can turn your camera off at any time during the video-conferencing interview. I will also write notes during the interview with your permission. There is a possibility for a second interview completed over video-conferencing or telephone that will last about 15 to 20 minutes. This interview is to check that I am accurately understanding your experiences.

What are the risks and discomforts?

There are no anticipated dangers with participating in this study, although talking about intimate memories or events may cause you to experience uncomfortable emotions. If this happens, you have the right to stop the interview if you wish. If you feel that you need more help coping with your feelings, I will provide you with a list of appropriate referrals for services that might be helpful to you, for example the phone number and location of the Alberta Mental Health Clinic.

In addition, due to the current COVID-19 pandemic, measures must be taken to ensure safety for both you as the participant and myself as the researcher. All interviews will be conducted virtually via video-conferencing, however, if this is not possible (poor internet connection, inability to find private space), in-person interviews may be used. Please review this link prior to our in-person meeting, and please contact me to reschedule if you experience any of the symptoms associated with COVID-19: https://www.albertahealthservices.ca/topics/Page16997.aspx. If in-person interviews occur, masks will be worn at all times and hand sanitizer will be available and used prior to commencing the interview. I will wipe the table, chair, and doorknob before and after the meeting, and no drinking or eating will be allowed. Physical distancing of at least two meters must be maintained during in-person interviews. It is important that if you feel any symptoms related to COVID-19, such as a cough, fever, or chills, that you inform me immediately so that we can reschedule the interview. In addition, if I become ill, I will inform you as soon as possible so as to not inconvenience you and allow for prompt rescheduling of the interview. If in-person interviews are utilized, I will discuss the procedure and location of the interview with you at the time of scheduling our meeting so that it is in alignment with current University of Lethbridge procedures.

As a registered nurse conducting research, I have an ethical responsibility to the College and Association of Registered Nurses (CARNA). If any information is shared with me that is deemed unethical or could impact the safety of others, I will have to discuss the situation with my supervisor and based on our discussion, I may have to take the necessary steps to report the situation to our regulatory body (CARNA).

I will take many steps to protect your privacy and confidentiality during this study. Although I may use some quotes, your name will not be included in any reports or the final paper. A different name of your choice will be used instead. As well, your employer's name or names of co-workers will be changed or deleted from the transcript. If you share events or places that may be identified by others, these will also be changed. Demographic data (age, gender, etc.) will be reported at the aggregate level. All audio-recorded files will be deleted once I have transcribed and reviewed them. Additionally, all the information I collect in this study will be kept strictly confidential in a locked file drawer in my home and password-protected computer, and only I and my supervisor, Dr. Monique Sedgwick (sworn to confidentiality) will have access to your transcript and demographic data. All collected information will be safeguarded in an external hard drive in a locked file drawer in my home, with the information on this hard drive being deleted after five years.

It is not possible to know all of the risks that may happen in a study, but the researchers have taken all reasonable safeguards to minimize any known risks to a study participant.

What are the benefits to me?

You are not expected to get any benefit from being in this research study. Although there are no direct benefits to you for participating in the study, the results of the study can help increase knowledge that may be used to support registered nurses who work on labour and delivery while pregnant.

Do I have to take part in the study?

Being in this study is your choice. If you decide to be in the study, you can change your mind and stop being in the study at any time, and it will in no way affect your current employment that you are entitled to. Continued employment on labour and delivery will not be jeopardized as a result of participating in the study since none of what you share with me will be shared with your employer. There are no consequences if you do not answer a question or if you decide to stop the interview. You may ask questions at any time of the study. You can also take a break, stop the audio recording, or withdraw from the study at any time for any reason. If you withdraw, you will have one week after the interview to request that your transcript and demographic information be destroyed.

Will I be paid to be in the research?

You will not receive payment for participating in this study, however, you will be reimbursed for any fees acquired due to participating in this study up to a maximum of $15.00. Examples of potential costs include parking payment for scheduled interviews.

Will my information be kept private?

During the study we will be collecting data about you. We will do everything we can to make sure that this data is kept private. No data relating to this study that includes your name will be released outside of the researcher's office or published by the researchers. Sometimes, by

law, we may have to release your information with your name so we cannot guarantee absolute privacy. However, we will make every legal effort to make sure that your information is kept private

I have an ethical responsibility to the College and Association of Registered Nurses (CARNA). If any information is shared with me that is deemed unethical or could impact the safety of others, I will have to discuss the situation with my supervisor and based on our discussion, I may have to take the necessary steps to report the situation to our regulatory body (CARNA).

I will take many steps to protect your privacy and confidentiality during this study. Although I may use some quotes, your name will not be included in any reports or the final paper. A different name of your choice will be used instead. As well, your employer's name or names of co-workers will be changed or deleted from the transcript. If you share events or places that may be identified by others, these will also be changed. Demographic data (age, gender, etc) will be reported at the aggregate level. All audio-recorded files will be deleted once I have transcribed and reviewed them. Additionally, all the information I collect in this study will be kept strictly confidential in a locked file drawer in my home and password-protected computer, and only I and my supervisor, Dr. Monique Sedgwick (sworn to confidentiality) will have access to your transcript and demographic data. All collected information will be safeguarded in an external hard drive in a locked file drawer in my home, with the information on this hard drive being deleted after five years.

What if I have questions?

If you have any questions about the research now or later, please contact Megan Reger [phone #].

You will have the chance to review the initial explanation of the study results if you wish before I include this explanation in my thesis (written report). You will be given one week to provide corrections to the initial findings. If you want to receive a copy of the written report, you may contact me directly at [phone #] or email at [email address]. You may also contact my supervisor, Dr. Monique Sedgwick at [email address].

At the end of the interview, you will be asked to provide suggestions for eligible participants who may be interested in participating in the study. You have no obligation to provide a referral and there are no consequences for not providing this information. However, in the event that you do provide me with names and contact information, I need to inform the potential participants how I came to have access to their contact information. I would also truly appreciate it if you would tell other registered nurses about the study. Interested participants can contact me directly using the information on my business card

If you have any questions regarding your rights as a research participant, you may contact the Research Ethics Office at the University of Alberta at 780-492-2615. This office has no affiliation with the study investigators.

University of Lethbridge
Faculty of Health Sciences

4401 University Drive
Lethbridge, Alberta, Canada
T1K 3M4

Phone 403.329.2699
Fax 403.329.2668

http://www.uleth.ca/hlsc

CONSENT

Title of Study: A Descriptive Qualitative Research Study Exploring a Registered Nurse's Pregnancy and Birth Experience While Working on Labour and Delivery

Principal Investigator: Megan Reger, BN, RN, Graduate Student
Phone Number: 403-795-3904
Study Coordinator: Monique Sedgwick, PhD, RN,
E-mail: [email address]

	Yes	No
Do you understand that you have been asked to be in a research study?	☐	☐
Have you read and received a copy of the attached Information Sheet?	☐	☐
Do you understand the benefits and risks involved in taking part in this research study?	☐	☐
Have you had an opportunity to ask questions and discuss this study?	☐	☐
Do you understand that you are free to leave the study at any time without having to give a reason and without affecting your employment?	☐	☐
Has the issue of confidentiality been explained to you?	☐	☐
Do you understand who will have access to your study records, including identifying information (name, age, location)?	☐	☐

Who explained this study to you? _____

I agree to take part in this study:

Research Participant _____
(Printed Name)

Signature of Research Participant:_____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee _____ Date _____

THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A COPY GIVEN TO THE RESEARCH PARTICIPANT

Appendix I: Sample Script

Hello!

My name is Megan and I am a graduate student at the University of Lethbridge. I would like to first thank you for sharing your time with me today. I truly appreciate you helping me out with this study. Thank you for taking the time to review the consent form and send it back to me prior to this meeting (potentially a virtual meeting). Do you have any questions about what is in the consent form?

My goal for today is to understand your experiences of being pregnant while working on labour and delivery, and how you believe working in this area has influenced your personal childbirth experience.

The interview today will take between 60 and 75 minutes.

At any time during the interview, you are free to take a break, stop the audio recording or interview whenever you like. You are free to refuse to answer any questions I might ask. Just let me know.

You may ask me any questions at any time during this study. Remember, the focus of this interview is to understand your experience

You need to know that there is no right or wrong answer to my questions. I simply want to learn about your experiences.

Do you have any questions about what will happen during the interview?

I will now turn on the recorder to start the interview.

Telephone Interviews:

In the event of a disconnection, I will immediately call you back.

Microsoft Teams Video Conference:

If at any point this meeting link is disrupted, and connection is lost, I will email you immediately with a new meeting link. You also have my phone number, feel free to contact me by this number if you do not receive an email after disconnection.

Reinforce:

Before we proceed further in the interview, are you still willing to continue participation in the study?

Closing Remarks:

Thank you for sharing your experience with me. If it's okay with you, I like to ask how the interview went for you? Do you have any other questions in general for me or about the study? I would like to let you know that I appreciate your willingness to participate in the study. I can reassure you that I will take every step to ensure that all the information you shared will remain confidential.

Before I let you go, would you be willing to provide contact information of a Registered Nurse who you think might be interested in participating in the study? You are not obligated to provide me any information and there is no penalty for not doing so. However, in the event that you provide me with contacts, I need to inform them that you were the source of the referral. I would truly appreciate it if you would tell other people about this study. Interested participants can contact me directly. Here's my card, you can share it with your colleagues if you would like.

If any questions or concerns arise, please do not hesitate to contact me. Thank you once again for participating in the study. Take care and have a good day!

Script for Potential Participants:

"My name is Megan Reger and I am a graduate student from the University of Lethbridge. My research supervisor is Dr. Monique Sedgwick. Your name and contact information were provided to me by [participant] who suggested that you may be interested in participating in my research study. Is now a good time to provide information about my study? I am also willing to set up a time to discuss this further in the near future.

Appendix J: Audit Trail

Part 1: Transcript Excerpt	**My Analytic Memos/Notes**
They don't know. I mean yea it's kind of strange having your coworkers so up close and personal but in the same sense, they are like sisters because you are there all of the time so it's almost relieving in that sense too because you knew they were going to look after you like your family. So… yea…. I felt relieved more than anything working there and labouring there.	Sense of belonging… Like family, a closeness similar to that between kin. Comforted by this
Part 2: In Vivo Codes from Excerpt	**Grouping of Codes**
like sisters there all of the time look after you like your family	Added to grouping initially titled *connection to co-workers*, which became the category *The Power of the Sisterhood* when I formally named each category

Part 3: Written Excerpt of Description from Findings

It appears there is comfort in transitioning through pregnancy and delivering amongst co-workers, with participants describing the close relationship between nurses as being "like sisters."