Seeking safe harbour:
Water immersion for women with complex pregnancy

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A thesis submitted in fulfilment of the degree Master of Midwifery at Otago Polytechnic, Dunedin, New Zealand

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Declaration Concerning Thesis Presented for the Degree of Master of Midwifery

I, Kelly Ford Kara

solemnly and sincerely declare, in relation to the thesis/dissertation/exhibition entitled:

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ABSTRACT

Background: Water immersion is used by women, particularly within midwifery-led settings, as a strategy to manage the sensations of labour. Low-risk women who have used water immersion in labour express feelings of increased relaxation, support and control in their labour and birth experience. Being labelled 'high risk' can significantly impact both a woman's experience of her pregnancy and her opportunity for experiencing a physiological birth. Women with complex pregnancies have reported an increase in anxiety and a feeling that their normal childbearing journey has been interrupted and subsumed by medical monitoring and risk management. Midwifery frameworks in Aotearoa New Zealand protect and promote the woman's role as a decision maker within her experience and her right to make informed decisions about her care.

Aims: The aim of this research was to develop an understanding of the influences, facilitators and barriers for women who chose to use water immersion for labour and birth, in a hospital setting, when they were labelled/identified as being clinically complex, as well as to explore their experience of using water immersion in labour.

Methods: A qualitative descriptive inquiry, using semi-structured interviews was undertaken to explore seven women's experiences of using water immersion during their labour and/or birth after having a complex pregnancy. Inductive thematic analysis was used to analyse participant data.

Findings: Thematic analysis identified four themes within the women's experiences. Women use water immersion to resist the medicalisation of their birthing experience and protect themselves from the iatrogenic risks of birthing within a hospital setting. The desire to use water immersion is often driven by dissatisfaction with previous medicalised experiences of birth and the women's desire to avoid repeating these experiences. Water provides a safe and protected space to labour which supports a sense of control and privacy. The LMC midwife is a vital ally and advocate in negotiating to use water immersion within the hospital setting. In this environment, staff can either facilitate or be barriers to using water immersion in labour with a complex pregnancy.

Conclusions: Women use water immersion in labour to optimise their opportunity for physiological birthing, often in response to previous medicalised births. Water immersion is experienced positively as a strategy to manage labour. Individualised holistic midwifery care from a Lead Maternity Care midwife was valued by the women and viewed as a key support in negotiating for the choice of water immersion. Women needed to purposefully seek a midwife who was willing to support them in their choice to use water immersion.

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"The truest, most beautiful life never promises to be an easy one. We need to let go of the lie that it's supposed to be."

— Glennon Doyle, Untamed

I waited to start my Master's journey until I felt that it was the 'right time'. I had the time, energy and headspace to commit to the undertaking. Well life had other plans, it kept moving at full speed with new and unusual turns along the way. I am so appreciative to those people around me who have offered the support needed to see this journey through. At times that support was encouragement to keep going, listening ears and thoughtful responses and sometimes it was supporting me in my plan to step back and take a breath until there was space in my life to return to the keyboard.

First and foremost, I would like to thank my family for their unwavering support. I remember when I first started my Master's path, sitting at the side of the swimming pool while the kids were at swimming lessons with articles and highlighter in hand, starting to get a grasp of my research topic. This very much set the tone for the remainder of my Master's path. Squeezed in around the rest of my life, but also feeding a fire inside which is my passion for midwifery, women's choice and the role of water immersion in physiological, empowering birthing.

To the women who shared their precious kōrero with me, thank you for taking the time and trusting me with your stories. I truly believe that it is through deeply listening to women we remain connected to the soul of what midwifery is.

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CHAPTER ONE - INTRODUCTION

Water immersion and water birth have increased in popularity over recent decades as a strategy for managing the sensations of labour. It is more common within midwifery-led settings such as home and primary birthing units, with the use of water immersion decreasing as the birth setting becomes more biomedically focussed (Midwifery and Maternity Provider Organisation/New Zealand College of Midwives, 2018). The maternity system in Aotearoa New Zealand differs from many worldwide, with a fully funded continuity of care midwifery model embedded within the wider health and maternity system. The majority of childbearing women in Aotearoa New Zealand have continuity of care provided by a community midwife throughout their pregnancy, and this includes women with complexity who have specialist input during their pregnancies (Ministry of Health (MOH, 2017); Skinner, 2011). Established referral pathways enable women to receive specialist input as required while maintaining primary continuity of midwifery services from a community-based midwife (Malatest International, 2012; MOH, 2012).

There are a number of professional and regulatory codes in Aotearoa New Zealand for all health professionals including midwives and obstetricians, which protect and support the woman's right to make informed decisions throughout her pregnancy both to choose and decline health care recommendations and options (Health and Disability Commissioner, 1996; Midwifery Council, 2007; New Zealand College of Midwives (NZCOM), 2015; The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), 2016). It is expected that any specialist advice during the childbearing journey will be provided within a three-way context including the woman, her midwife and the specialist, and that this will be provided in a way which maintains the woman's centrality as an informed decision maker (MOH, 2012; RANZCOG, 2016). Multi-disciplinary consensus guidelines have been developed which outline a range of clinical conditions, ascribe levels of risk and the recommended paths of referral for the varying risk levels (MOH, 2012; Skinner & Foureur, 2010). Within these guidelines there is also a pathway outlining the woman's ability and right to decline the recommended path of care. These structures may mean that the experience of choosing and using water immersion in the context of identified risk factors may be different

for women in Aotearoa New Zealand than in other countries where the woman's role as an informed decision maker is not so clearly embedded in professional and legislative codes of conduct, ethics and rights.

Current water immersion guidelines recommend restricting the use of water immersion, on the whole, to women who are considered low risk in their pregnancy. A range of professional statements and guidelines influence maternity care practices that may impact on women's abilities to choose water immersion for their labour and birth (National Institute of Health and Care Excellence (NICE), 2019; NZCOM, 2015; RANZCOG, 2017). It is acknowledged that the available research regarding waterbirth has predominantly focussed upon women who are experiencing a healthy pregnancy and birth with no known complications (Royal College of Obstetricians and Gynaecologists and The Royal College of Midwives (RCOG/RCM), 2006). While few guidelines specifically outline what is considered a healthy pregnancy and birth, there is generally an understanding that this includes women with uncomplicated pregnancies, who are labouring at term with a baby in a cephalic presentation and the lack of clinical complexity or risk factors (Auckland District Health Board (ADHB), 2017; Canterbury District Health Board (CDHB), 2016; Hutt Maternity, 2012; NZCOM 2015). There has been some movement recently on this general position with the release of the new guidelines from NICE (NICE, 2019). These guidelines have an updated recommendation for women experiencing a vaginal birth after caesarean and recommends supporting a full range of pain relief options including the use of water immersion for labour and birth (NICE, 2019).

The issue with the current guidelines and recommendations is that there exists a gap in both the research and within professional and organisational guidelines for women who have been labelled as high-risk or clinically complex in their pregnancy. Research has demonstrated that risk scoring in pregnancy has limited accuracy in predicting the occurrence of actual complications and results in a large number of women being labelled as high-risk (Jordan & Murphy, 2009). The experience of a high-risk pregnancy can result in a range of emotional and psychosocial challenges for women throughout their pregnancy, birth and postpartum (Isaacs & Andipatin, 2020). Internationally women who have been identified as being 'highrisk' in pregnancy are, at times, choosing to birth outside of the hospital system because of the challenges of negotiating for choices within their maternity care which meet their

individual personal, clinical, and cultural needs in pregnancy and birth (Jackson et al., 2012; Keedle et al., 2015; Sassine & Dahlen, 2020). The current limitations on water immersion as being appropriate only for low-risk women means that, for women who have been categorised as high risk there are limited pain management strategies available in labour that support the physiological process of birth. Their choices of pain relief in labour can be limited to pharmacological measures which may encompass additional risk of increased intervention and are associated with decreased maternal satisfaction in the birth experience (van Stenus et al., 2018).

The frameworks within the Aotearoa New Zealand maternity system around informed choice and woman-centred care would suggest the women should not be experiencing the same difficulties as reported overseas with negotiating care which meets their individual needs in labour and birth. This research topic and question are informed by the desire to understand if the context of care in Aotearoa New Zealand results in women with complex clinical circumstances being in a position of power to negotiate individualised maternity care in their choice of using water immersion. Midwifery is a woman centred profession and with the partnership model of midwifery in Aotearoa New Zealand it is important to explore whether women's experience of receiving midwifery care is reflective of these values. It is essential to gain further insight and understanding of what informs women's interpretation of pregnancy risk and how they experience the process of negotiating for choices which may be considered to be 'outside the guidelines'.

Throughout my career as a midwife working within a variety of settings including homebirth, primary, secondary and tertiary settings I have supported women to labour and birth in water. As a midwife I have supported women in their desire to use water immersion in labour and birth when they have clinical circumstances which do not sit within the water immersion guidelines. In this situation I acknowledge the midwifery role of sharing both what is known and what is not yet known about water immersion for women with risk factors. I have seen how women value midwifery support and the challenges that can be put in the path of both the midwife and women in enacting the woman's choice within a hospital setting. As a midwife I have experienced the feeling of professional 'risk' when supporting a woman in this choice

and the institutional perceptions of both my midwifery practice and the woman's decision making.

As a birthing woman I have also made the choice to use water immersion in labour when my personal circumstances sat outside the local policies and guidelines. I was aware, even as an experienced health professional, of the importance of having midwifery support to advocate and protect my choice when I was not able to.

Anecdotally, as a midwife and a woman I am aware that the ability to make the choice to use water as a part of the strategy for labour is dependent not only on the woman's own beliefs and desires but also the beliefs and decisions of those health professionals who are involved in and therefore may influence her maternity experience, both directly and indirectly.

This research explores the experiences of women with complex pregnancies who have negotiated for and used water immersion during their labour and birth. Because of the lack of research into women's experiences of successfully negotiating a choice that sits outside current hospital policies and guidelines it focuses upon women who have chosen to birth within the hospital setting, where evidence has shown this negotiation can be most challenging.

The research question for this inquiry was "what are the experiences of women with a clinically complex pregnancy who choose and use water immersion in labour and/or birth within a hospital setting in Aotearoa New Zealand?"

The aim of this research was to develop an understanding of the influences, facilitators and barriers for women who chose to use water immersion for labour and birth when they were labelled/identified as being clinically complex, as well as to explore their experience of using water immersion in labour.

To meet the aims of the research the objectives were to:

1. Understand women's motivations to negotiate water immersion
2. Explore women's experience of negotiating this option with their caregivers
3. Describe women's experience of using water immersion in complex labour

Understanding what has informed, supported or been a barrier to these choices can support midwives and others involved in maternity care to improve the care provided to women who make these choices. It is also valuable to understand the women's experiences of using water during labour to add to the understanding of birth experiences for women with complex pregnancies.

This research utilised qualitative inquiry with an interpretive descriptive approach to explore the experiences of seven women. Using qualitative inquiry was appropriate for this research topic as rather than seeking to measure and discover a single 'truth' of using water immersion in a clinically complex pregnancy the aim was to gain insights into the women's' realities through their own words, descriptions and understanding of their choices and experiences (Milne & Oberle, 2005; Sandelowski, 2000).

An interpretive descriptive approach helped to develop insight and understanding of the complex constructed realities that lie within personal experiences while recognising that there will be some shared realities within these experiences (Thorne et al., 2004). The research approach is aligned with the aims of this research because it provided "factual responses to questions about how people feel about a particular space, what reasons they have for using features of the space, who is using particular services or functions of a space, and the factors that facilitate or hinder use" (Colorafi & Evans, 2016, p. 17). Inductive thematic analysis was then used to analyse the data collected from semi-structured interviews with participants to support the development of new understandings and insights into of this area (Braun & Clarke, 2006; Elo & Kyngäs, 2008). Inductive analysis was chosen as this topic area has not been widely researched, and there are few current theories to understand this area of women's experiences. The qualitative descriptive approach and the related thematic analysis were approached using a framework of constructionism to understand the reality of the experience from the participants' point of view (Braun & Clarke, 2006). Constructionism is a theoretical approach with the position that there is no single truth related to a lived experience, but that the experiences are shaped by the way participants interpret and make sense of these events, and the contexts in which the events take place (Liamputtong, 2013).

Structure of the thesis

This introductory chapter provides a brief introduction to the use of water immersion during labour and the area this research will explore. Chapter two provides the background to this research, providing context regarding water immersion as a strategy in labour and birth in Aotearoa New Zealand and considering complexity and how this impacts on pregnancy. This chapter also clearly identifies the gap within the current research where this research is situated. Following this, the third chapter outlines the literature currently available exploring the research area. Because there is little research into the experiences of women with complex pregnancy using water immersion, this chapter also includes a review of extant literature about the benefits of water immersion, the impacts of complex pregnancy and considers the concept of risk.

The fourth chapter explores the methodology underpinning this research and the methods used. It details how this research was undertaken including the decision making undertaken to select the aspects of this research including recruitment, data collection and analysis. This chapter also outlines the cultural and ethical aspects considered when undertaking this research. The findings chapter is the fifth chapter and introduces the women who participated in this research and using quotes from their interviews explores the four themes identified from within the data. The sixth and final chapter of the thesis is the discussion chapter, which positions the findings of this research within the existing literature. This discussion includes consideration of the broader issues within maternity care which impact on women's abilities to make unconventional birth choices.

CHAPTER TWO - BACKGROUND

As discussed in the previous chapter, this background chapter will provide context for this study including the setting of midwifery and maternity care in Aotearoa New Zealand. This chapter will also consider the role that the concept of risk and the impact of being labelled 'high risk' on a woman's pregnancy experience and choices. Finally, the background of water immersion for use in labour and birth will be explored.

The maternity system in Aotearoa New Zealand funds midwifery care for all women, throughout the childbearing journey, fully integrated within the wider maternity and health systems. Within this integrated system government funding ensures that midwifery care is fully funded for all eligible women wherever they live within Aotearoa New Zealand (Eddy & Campbell, 2019). The majority of women are cared for throughout their pregnancy, birth and postpartum period primarily by a Lead Maternity Care (LMC) midwife who is a community-based midwife (Guilliland & Pairman, 2019) This community based LMC midwife is responsible for the coordination and provision of maternity care including appropriate and timely referrals to any specialist care recommended as a part of the woman's specific health and pregnancy needs.

LMC midwives can provide midwifery care wherever the woman chooses or needs to be, whether in the community, primary birthing units, secondary or tertiary hospital settings. Secondary and tertiary hospital settings provide both obstetric and neonatal services, with the difference between the two settings being the level of complexity that can be managed. There is a nationally consistent Access Agreement which provides community based LMC midwives with the ability to provide midwifery care within maternity facilities while remaining accountable for their own midwifery practice (Eddy & Campbell, 2019). Women who receive obstetric input during their pregnancy will still have care provided by a midwife during this time. The midwifery work force in Aotearoa New Zealand work predominantly either as community based, self-employed, LMC midwives or as core midwives. Core midwives are those who work shifts as employed staff within birthing and maternity facilities and provide care alongside community LMC midwives and obstetricians for women within those facilities.

The philosophy of midwifery partnership is fundamental to midwifery practice in Aotearoa New Zealand and is embedded within the professional and regulatory frameworks (Guilliland & Pairman, 2019). This partnership relationship is based on reciprocity where the woman and the midwife share their knowledge, experiences and skills which supports appropriate decision making in pregnancy (Guilliland & Pairman, 2019). Appropriate decision making has been viewed as being reliant on the provision of time, through continuity of care, to develop a shared understanding and to undertake the process of negotiating choices and building confidence in the decisions being made. Thus, the development of a functioning reciprocal partnership between the midwife and the woman relies on the development of trust along with an understanding on both sides of the shared decision making and responsibilities (Guilliland & Pairman, 2019). Supporting informed choice is a further key aspect of the midwifery partnership, as is the midwifery role in facilitating "an experience which optimises the outcome for the woman, her baby and family, and supports on-going confidence in parenting" (Guilliland & Pairman, 2019, p. 12). The midwife, wherever they practice, in Aotearoa New Zealand is an autonomous practitioner within the professional and regulatory frameworks (Guilliland & Pairman, 2019). Professionally, this autonomy supports midwives practicing on their own responsibility within the defined scope of midwifery practice. This practice is expected to sit within the numerous frameworks which inform midwifery practice, including the midwifery partnership, informed choice, legal structures, ethical codes and professional guidelines.

In addition to the midwifery partnership, there are specific frameworks to emphasise and promote the integral position of cultural competence within the provision of midwifery care in Aotearoa New Zealand. The cultural competence frameworks outline the importance of midwifery care being provided in a way which respects and incorporates an individual's culture and values into the provision of individualised midwifery care (Midwifery Council of New Zealand, 2021). Tūranga Kaupapa are guidelines created by Nga Maia o Aotearoa me Te Waipounamu which inform midwifery practice and outline key concepts in ensuring midwifery care is culturally responsive and appropriate for Māori. Nga Maia o Aotearoa are a national collective of Māori midwives who work to ensure the inclusion and valuing of indigenous knowledge within midwifery practice (Nga Maia Māori Midwives Aotearoa, 2018). The concepts in Tūranga Kaupapa emphasise the need to maintain the dignity of

women and their whanau during their childbearing process, and to work to ensure that the "physical, spiritual, emotional and mental wellbeing of the woman and her whānau is promoted and maintained" (Nga Maia o Aotearoa me Te Waipounamu, 2006, para 3).

There are a number of professional and regulatory codes in Aotearoa New Zealand for all health professionals, including midwives and obstetricians, which protect and support the rights of health consumers to make informed decisions throughout their care, to accept, negotiate and decline health care recommendations and options (Health and Disability Commissioner, 1996; Midwifery Council, 2007; NZCOM, 2015; RANZCOG, 2016). When complexity has been identified within a woman's pregnancy there are Ministry of Health guidelines which have been developed with multi-disciplinary and consumer input to guide care planning (Eddy & Campbell, 2019). These guidelines provide a national framework outlining expected referral, consultation and clinical responsibility for a range of specific clinical circumstances and outline a recommended path of action in response to the identification of clinical complexity (MOH, 2012; Skinner & Foureur, 2010). These paths of action can either be a primary referral with a primary health service, such as a general practitioner or lactation consultant, a specialist referral to an obstetrician or appropriate medical specialist, or a transfer of care to a specialist until either the condition has resolved or for the remainder of the pregnancy as necessary (MOH, 2012). Within these guidelines there is a specific pathway for when a woman chooses to decline the recommended referral, consultation or transfer of care. The decision making for this remains the woman's prerogative, which is protected in numerous laws, ethical and professional codes.

LMC midwives consider these guidelines as a useful tool within their practice when considering the need for referral (Skinner, 2011). Within these guidelines it is expected when specialist advice is recommended and undertaken, it will be provided within a three-way context including the woman, her midwife and the specialist, and that this will ensure the woman's ongoing role as an informed decision maker (MOH, 2012; RANZCOG, 2016). Women who require specialist input throughout their maternity journey will continue to have a midwife providing their clinical care throughout their pregnancy and birthing experience alongside the specialist input. This care may be provided by the community LMC midwife or by the core midwifery staff depending on the local clinical practices when clinical

responsibility for care has been transferred to an obstetrician due to the complexity (Gilkison et al., 2019).

Risk and pregnancy

Risk and normality within pregnancy and birth has been strongly debated for a number of years and are recognised as being concepts which have no universally accepted definition or understanding (Wickham, 2011; World Health Organisation (WHO), 1996). The definition of a normal birth used by the World Health Organisation and referred to in a range of research and documents is “spontaneous in onset, low-risk at the start of labour and remaining so throughout labour and delivery” (WHO, 1996, p. 4). Current risk categorisation in pregnancy is restricted to either low or high risk, as "all pregnant women are considered at risk and in need of medical supervision and monitoring” (Jordan & Murphy, 2009, p. 191; Scamell, 2011). The term ‘high-risk pregnancy’ was developed in the 1960’s with the widespread use of risk screening and risk scoring as a part of standard antenatal care (Polomeno, 1997). Within modern maternity care the aversion to risk, and therefore the ongoing management of risk is now a key underpinning concept (Bryers & van Teijlingen, 2010; Scamell et al., 2019; Smith et al., 2012). This concept drove the move to a medical model of maternity care across the twentieth century, with the premise that risk and risky situations can be identified, managed and controlled with the application of medical and scientific knowledge and technology. The belief that has continued parallel to these developments is that with the increasingly widespread use of obstetric interventions, adverse outcomes should be able to be avoided (Scamell et al, 2019). These changing beliefs led to an acceptance by many women and midwives that the routines and rules of hospital based maternity care were in the best interests of women and babies (Guilliand & Pairman, 2010, p. 16). In Aotearoa New Zealand, as internationally, when birth became increasingly medicalised and hospital based, birth was viewed more as a pathological event, than a normal life event and in Aotearoa New Zealand over time this belief was internalised by the dominant Pākehā culture (Gulliland & Pairman, 2010).

The assessment of risk during pregnancy includes both “subjective and objective assessment of physical, psychosocial, nutritional, genetic and environmental factors, done primarily via

laboratory testing, client history and physical examination" (Jordan & Murphy, 2009, p. 191). These risks, as categorised and assessed by the 'experts' in childbirth, then shape the options available to women during their pregnancy and birth (Bryers & van Teijlongen, 2010; Scamell & Alaszewski, 2012). Current risk management approaches prioritise the avoidance of rare extreme risks, such as infant or maternal mortality. These rare events are often associated with single identified issues and despite these risks often being low prevalence events, they result in intervention for a large number of women and babies to avoid a single incident (Bisits, 2016; Scamell et al, 2019). Commonly, this results in the avoidance of highly unlikely risks to a baby being prioritised over the more common risks of morbidity to the mother, which includes the iatrogenic risks of intervention and medicalisation (Scamell et al, 2019). The move to this risk management approach in maternity care has increased risk management concerns for midwives around the accountability and blame culture that can develop as a part of risk averse culture (Cooper et al., 2019; Scamell & Alaszewski, 2012; Skinner & Maude, 2016).

The resultant use of technology, surveillance and intervention to manage the identified risks, or risk viewed as inherent to labour and birth, are considered more important than the woman's decision making around other aspects of her birth (Scamell et al, 2019; Skinner & Maude, 2016). The internalised expectation of 'self-surveillance' and the morality associated with being a 'good mother' mean that the acceptance of these interventions is viewed as more important than a woman's autonomy or decision making as it demonstrates her prioritising her baby and not accepting 'unacceptable' risks (Newnham & Kirkham, 2019). This is a culturally mediated response which defines what is a tolerable or acceptable risk and through this process works to control and manage women's behaviour during pregnancy and birth (Coxon et al., 2014).

Increasing management of risk during pregnancy and birth is altering the work of midwives and the ability to truly work within a woman-centred model of care. Technocratic biomedical hospital environments have powerful cultural norms which limit and shape the ways the midwives can be with women (Davis & Homer, 2016). Midwives recognise that their midwifery practice and decision making is influenced within this setting by the dominant obstetric discourse and the surveillance of their practice (Davis & Homer, 2016). The obstetric dominance and scrutiny within the hospital setting limits midwives' ability to practice

autonomously or to support women in their informed decision making (Aanensen et al., 2018; Cooper et al., 2020; Keating & Fleming, 2009). This is influenced, for midwives working within high tech birth settings, through the process of socialisation to the institutional birth culture of fear and risk management (Seibold et al., 2010). While midwives may come into the profession with their own beliefs around the normality of birth, working in risk focussed environments can influence them to become increasingly interventionalist and risk focussed (Seibold et al., 2010). A further challenge of this environment is that midwives who actively work to protect normal birth and use their physiologically supportive midwifery skills, which do not rely on surveillance and technology, can be viewed as 'alternative', different, mad or bolshie (Aanensen et al., 2018; Russell, 2007).

The high technology, risk focussed hospital environment can impact upon midwives' individual practice with a developing belief that to focus upon promoting normality within this setting can be unsafe. This perception can lead to the increase in the use of intervention 'to be on the safe side' rather than for the benefit of the individual mother and baby (Aanensen et al., 2018). Within Aotearoa New Zealand it is recognised by midwives that the relationships with and scrutiny of colleagues can make practicing autonomously more difficult for employed midwives than it is for self-employed LMC midwives (Clemons et al., 2020). Even for self-employed LMC midwives the balancing of the woman's decision making when it sits outside the policies and protocols with the safety and accountability to the midwife can be a stressful process (Clemons et al., 2020). However, the ability to move in and out of this hospital setting and have close collegial relationships outside this environment worked to support community based LMC midwives in retaining their autonomy of practice.

Being labelled 'high-risk'

Being labelled as 'high-risk' during pregnancy or birth has the potential to change a woman's experience of her pregnancy, birth, and mothering. This can result in increased distress and psychosocial stress (Currie & Barber, 2016; Isaacs & Andipatin, 2020). Women can recall their high-risk pregnancy as being a traumatic experience and the impacts of this are exacerbated by the lack of support for this aspect of their experience (Isaacs & Andipatin, 2020). Fear, frustration, sadness, guilt and grief are also common emotional responses to a

high-risk pregnancy. Women in Aotearoa New Zealand have identified that the loss of control and feelings of helplessness were a particular challenge of having a high-risk pregnancy (Currie & Barber, 2016). Women felt like their normal experience of pregnancy had been interrupted and had been subsumed by the medical care and monitoring associated with their complexity. Both women and midwives in Aotearoa New Zealand identified the importance of the partnership relationship between them to offer support and stability through this process, with women describing this relationship as crucial (Currie & Barber, 2016; Skinner, 2011). Continuity of care from the LMC midwife is vital in the context of risk as women feel vulnerable within the hospital setting and find it difficult to advocate for themselves without the support from their midwife and family (Currie & Barber, 2016; Skinner, 2011).

Women's perception of risk during pregnancy is informed by a myriad of personal factors including their overall life experience, personal experience of medical interactions as well as personal perspectives on pregnancy and birth. Women who have been identified as high-risk are aware of their condition and the potential medical risks associated with this, and this is considered alongside their broader understanding of risk, to inform their decision making, rather than any lack of awareness of risk (Lee et al., 2016b; McKenna & Symon, 2014). Some women with clinically complex pregnancies, at times, make decisions regarding their pregnancies which sit outside the dominant biomedical model, such as choosing to homebirth or freebirth (Jackson et al., 2012; Keedle et al., 2015; Lee et al., 2016a, 2016b). In these contexts, women often consider more closely the iatrogenic risks of birthing in hospital including the framing of their bodies as 'flawed' and the physical and psychosocial risks associated with birthing in a medicalised setting (Chadwick & Foster, 2014). These women identified feeling vulnerable to unnecessary interventions within the hospital system, challenging the widely held idea that hospital birth constitutes the safest place for birthing (Jackson et al., 2012).

Women with clinically complex pregnancies who have decided not to birth in hospital as recommended, have reported feeling vulnerable to "the risks of loss of dignity, objectification and loss of control over decision-making" within the hospital system (Chadwick & Foster, 2014, p. 78). Some women, who were planning a VBAC in Australia, found that attempting to negotiate an individual care plan, which accepted some interventions and declined others,

within the hospital setting was a re-traumatising experience (Keedle et al., 2015). These interactions included intimidation, scaremongering and a lack of willingness on behalf of the health professionals to compromise on any aspect of the recommended care plan including the use of water immersion.

Water immersion in labour

Water immersion is increasingly used and accepted in many birth settings internationally, particularly in midwifery-led settings (Cluett et al., 2018). Water immersion in labour has a long history with the first recorded water births in the early 19th century and the first summary of data relating to water immersion in labour within an obstetric setting being published in The Lancet in 1983 (Odent, 1983). Water immersion was first recorded as being used within Aotearoa New Zealand in 1982 within the homebirth setting which prompted a Health Department investigation and questions in parliament (Donley, 1986). The resulting fallout of this was used to promote concerns about water birth, home birth and midwifery care in general (Donley, 1986). In the intervening time water immersion has become more widely accepted and increasingly available within a variety of birth settings.

The use of water immersion in labour in Aotearoa New Zealand varies between different birthing settings, with its use being more prevalent at home births (27%) and primary birthing units (34%) and reducing significantly to only 3% -7% in the obstetrically dominant settings of secondary and tertiary hospitals (NZCOM, 2018). Water immersion as a practice is perceived differently within different birth settings. The birthing environment impacts on the willingness of staff to support water immersion in labour. Birth facilities with higher rates of epidural, caesarean section and obstetric oversight are associated with staff more likely to perceive barriers to the use of water immersion in labour (Stark & Miller, 2009). Water immersion can be viewed as more labour intensive than standardised care with medical intervention and risk management practices viewed as a higher priority within hospital settings (Russell, 2011). A positive social identity for an employed hospital midwife is related to ideas such as being busy, loyal to their midwifery colleagues and the needs of the institution with less focus placed on being women centred midwifery care (Russell, 2011). While the idea of being autonomous, focussed on woman centred care and promoting normal labour and birth

were prioritised in principle, in practice this was seen as more difficult and often in opposition to the requirements of the institution (Aanensen, 2018; Russell, 2011; Seibold et al., 2010).

Guidance regarding the use of water immersion in Aotearoa New Zealand takes the form of policies and protocols at either individual facility or District Health Board (DHB) level, as well as guidance statements from professional bodies. There is a consensus statement from the New Zealand College of Midwives regarding the use of water during labour and birth (NZCOM, 2015a). This statement notes that "water immersion and water birth are considered safe when there are no factors noted in fetal or maternal wellbeing prior to or during labour that would increase the risk of labouring and/or birthing in water" (NZCOM, 2015a, p. 1). There is also a statement from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG, 2017) which provides guidance regarding the use of water immersion for labour and birth. This statement outlines that the use of water can be considered appropriate for "healthy women with uncomplicated pregnancies" (RANZCOG, 2017). Individual DHB's set their own policies regarding the use of water immersion during labour and birth and these state that water immersion can be used for women experiencing a 'low risk' pregnancy (ADHB, 2017; CDHB, 2016; Hutt Maternity, 2015). In some regions policies state that water immersion may be appropriate for women whose clinical conditions "require" continuous fetal monitoring, "contingent on being able to get a clear CTG trace abdominally", and there having been a discussion with the obstetrician and coordinating midwife (CDHB, 2016, p. 1).

Historically there has been variation within localised guidelines regarding the categorisation of a 'low-risk' pregnancy and the clinical complexities which would mean that water immersion was no longer recommended (Chapman, 2004). In Aotearoa New Zealand a review of water birth guidelines from five North Island hospitals found significant variation in key aspects of the guidelines, including the contraindications to pool use and recommended monitoring during water immersion (Chapman, 2004). Chapman (2004) raised questions about the discrepancies between protocols, and what these reflected about the evidence base used to inform water birth guidelines. More commonly now, water immersion guidelines in Aotearoa New Zealand broadly restrict water immersion to women with low-risk pregnancy, rather than outlining specific contraindications for access to water immersion. Women with risk factors

are still able to choose to access water immersion within the hospital setting. Recent research by Maude and Kim (2020) exploring the use of water immersion at one New Zealand District Health Board showed that 18.7% of the women included in their research used water immersion in labour in the presence of recorded risk factors.

Waterbirth guidelines within Australia have similar inconsistencies in the way that research is interpreted and applied, and at times authoritative obstetric opinion is used where a gap in evidence has been identified (Cooper et al., 2018). The policies and guidelines relating to water immersion are most frequently based on quantitative research regarding water immersion with little recognition of women's experiences and desires in relation to it (Cooper et al., 2018). In their critical analysis of Australian waterbirth policies, Cooper, et al. (2017) described how policies were frequently informed by secondary sources such as other institutions' policies and did not always use up-to-date meta-analyses. The same authors in a later publication reporting midwives' perspective of water immersion policies found that there was limited input or engagement from consumers in the development of policies, which limited women's ability to make informed choices. Obstetric discourse is most evident within the policies and guidelines which can also work to limit the midwife's role as an autonomous practitioner. These limitations restrict the ability to facilitate informed choice and the woman's ability to demonstrate her autonomy, which was even more evident if the woman was deemed 'high risk' (Cooper et al., 2017).

The difficulty with authoritative opinion being used within water immersion guidelines is that the dominant discourse in modern maternity is recognised to be obstetric knowledge (Newnham, 2014). This is challenging given that protecting and supporting physiological birth, and a depth of understanding regarding the role of water immersion in this, is not the domain of obstetrics, but rather the domain of midwifery. A survey of Australian obstetricians found that they received little education in their training regarding the use of water immersion in labour (Plint & Davis, 2016). This research also found that the majority of obstetricians placed little value on the benefits of water immersion, preferred not to care for women using water immersion and had concerns regarding the safety of water immersion. This aligns with research of health practitioners' attitudes to waterbirth in Ontario, Canada. Within this research there was a universal finding that none of the obstetricians surveyed would consider assisting with or offering hospital-based water birth in the future, whereas 97% of midwives

and half of general practitioners surveyed would consider this (Orrantia & Petrick, 2021). The obstetricians in this Canadian research had the perception of greater risks with water birth than consumers, midwives or general practitioners. They also perceived consumer interest in water birth as much lower than the other groups surveyed. Research with intrapartum nurses in the United States found that practitioners with less experience in water immersion and birth were more likely to develop belief systems focussed upon the risks of the practice (Stark & Miller, 2009). Within the tertiary maternity setting, the medicalised environment can limit water birth options for women by inhibiting staff abilities to support this option (Plint & Davis, 2016). While there is a body of evidence exploring waterbirth policies and practitioner beliefs in Australia and the United Kingdom there has been little current research into the waterbirth policies or practitioner belief systems which influence women's choices in New Zealand.

In this background chapter, the context for this research has been explored, including the setting of maternity care in Aotearoa New Zealand and the concept of risk and how 'risk' influences maternity care and the women's experiences. The position of water immersion in maternity care has also been explored. In the literature review chapter this aspect will be explored in more detail, summarising what is currently known in the literature about water immersion and the role of water immersion for women with complex pregnancy or birth.

CHAPTER THREE - LITERATURE REVIEW

This literature review chapter will provide a summary of the available literature which contributes to our current knowledge of water immersion and complex pregnancy. This will outline the current knowledge base relevant to the research question for this inquiry “what are the experiences of women with a clinically complex pregnancy who choose and use water immersion in labour and/or birth within a hospital setting in Aotearoa New Zealand?”.

The purpose of this literature review is to identify and critically evaluate the research available regarding the experiences of women with complex pregnancy using water immersion in labour and birth within the hospital setting. There is a scarcity of literature about this topic specifically, so I have identified and included the research that exists regarding the experiences of both low-risk and high-risk women who use water immersion during labour or birth within the hospital setting.

I completed this literature search using the electronic databases, including CINAHL, PubMed, Medline, EBSCO, available through the Otago Polytechnic library. I also completed searches using Google Scholar. Literature was also sourced through handsearching the reference lists of relevant articles. These searches were undertaken using combinations of these keywords:

Water immersion, water birth, waterbirth, hydrotherapy, birth pool, birthpool, bathing, bath, complication, complications, complexity, risk, high risk, high-risk, hospital, birth, labour, labor, VBAC, vaginal birth after caesarean, pre-eclampsia, pre eclampsia, diabetes, gestational diabetes

Full literature searches were undertaken three times within the process of this research. The keywords above were searched in English individually and combined with the use of BOOLEAN operators, with no restrictions on date of publication. After excluding publication duplicates, abstracts were reviewed to assess the relevance of the publication to the research question.

Within the process of this literature search I identified minimal literature within the specific topic area of water immersion for women who had been identified as having complexity

during pregnancy and birth. It seemed warranted to therefore explore ‘near-topic’ literature, in the hope that investigating these slightly peripheral areas would lend greater insight to the development and implementation of the research design. This literature review has been organised thematically to reflect the areas I canvassed to inform and contextualise my research.

- Safety of water immersion
- Experience of water immersion for women with a low-risk pregnancy
- Experience of pregnancy for women with complexity
- Water immersion during complex pregnancy and birth

Safety of water immersion

Water immersion has been used as a strategy for managing the sensations of labour increasingly over recent years and is available in mainstream maternity services in many countries (Clews et al., 2020; Cluett & Burns, 2018; Lathrop et al., 2018). The safety of water immersion, as far as maternal and neonatal outcomes are concerned has been widely assessed within the setting of maternity units internationally with observational studies.

Water immersion and waterbirth are largely considered safe for low-risk women with an increased likelihood of spontaneous physiological birth and fewer intrapartum interventions (Bailey et al., 2020; Burns et al., 2012; Henderson et al., 2014; Liu et al., 2014; Lukasse et al., 2014;). Water immersion has also specifically been found to reduce the use of epidural (Burns et al., 2012; Cluett et al., 2018; Nutter et al., 2014) and narcotic analgesia (Bailey et al., 2020). Water immersion has been associated with decreased likelihood of augmentation in labour (Bailey et al., 2020; Burns et al., 2012). Some research has identified that water immersion can increase the likelihood of a shorter first and/or second stage of labour (Lewis et al., 2018; Neiman et al., 2020). An Italian observational study (2505 women) reported that women labouring in water were more likely to adopt upright positions for birthing (Henderson et al., 2014).

There have been mixed findings regarding the incidence of postpartum haemorrhage with water birth with some finding a reduced incidence (Aughey et al., 2021; Nutter et al., 2014),

some increased incidence (Barry et al., 2020; Neiman et al., 2020) and some no difference (Bailey et al., 2020; Menakaya et al., 2013) between water immersion and control groups. Further, women are less likely to experience perineal trauma (Bailey et al., 2020; Lewis et al., 2018; Nutter et al., 2014; Sidebottom et al., 2020) or obstetric anal sphincter injuries (OASI) (Aughey et al., 2021; Menekaya et al., 2013; Nutter et al., 2014). Some studies identified no increase in perineal damage or OASI with the use of water immersion (Barry et al., 2020; Cluett et al., 2018; Shaw-Battista, 2017) whereas others identified an increased risk of perineal injury (Bovbjerg et al., 2016). In this study by Bovbjerg et al (2016) which identified increased risk of perineal injury by 11% for women who birthed in water they were not able to identify a pattern in type of perineal injury. They did identify a greater risk of perineal injury for women who had intended to birth in water but didn't had a more significant increase in perineal trauma than either women who birthed in the water or women who had not used water immersion at all.

Adverse neonatal outcomes with water birth, such as asphyxia, infection or neonatal unit admission, are rare and do not occur at higher rates than with conventional land birth practices (Aughey et al., 2021; Bailey et al., 2020; Barry et al., 2020; Bovbjerg et al., 2016; Burns et al., 2012; Cluett et al., 2018; Lathrop et al., 2018; Neiman et al., 2020; Nutter et al., 2014; Shaw-Battista, 2017; Sidebottom et al., 2020; Taylor et al., 2016; Vanderlaan et al., 2018). Umbilical cord snap has been identified as a risk during a water birth (Burns et al., 2012; Henderson et al., 2014). Nutter et al. (2014) identified a cord avulsion incidence of 2.4 per 1000 water births, but commented that comparison of risk cannot be made with conventional birth due to a lack of data to provide direct comparison.

Experience of water immersion for women with a low-risk pregnancy

Water immersion has been associated with a positive birth experience and women have reported that it supports their feeling of being in control and in a position of power during their labour (Barry et al., 2020; Cooper & Warland, 2019; Fair, et al., 2020; Feeley et al., 2021; Hall & Holloway, 1998; Lathrop et al., 2018; Nutter et al., 2014). Women with low-risk pregnancies using water immersion in labour have reported that it provides significant pain relief both during and between contractions and supports feelings of relaxation and ease during labour and birth (Carlsson & Ulfsdottir, 2020; Cooper & Warland, 2019; Fair et al.,

2020; Feeley et al., 2021; Liu et al., 2014; Maude & Foureur, 2007; Richmond, 2003; Ulfsdottir et al., 2018). Further, water immersion in labour provides support and buoyancy which supports movement in labour (Fair et al., 2020; Feeley et al., 2021; Maude & Foureur, 2007, Richmond, 2003; Ulfsdottir et al., 2018). In addition, the sense of privacy and protection provided by water immersion supported the women in feeling like they were not handing themselves over to the process of birth but rather remaining in a position to work with, control and manage their labour in the way they required (Clews et al., 2020; Cooper & Warland, 2019; Fair et al., 2020; Feeley et al., 2021; Maude & Foureur, 2007, Richmond, 2003; Ulfsdottir et al., 2018, Ulfsdottir et al., 2019). Women have also reported that water immersion helped them feel strong and able and that they were working with their body rather than against it during their labour and birth (Ulfsdottir, et al., 2018).

Women who use water immersion during labour and birth most often report the most positive childbirth experiences (Cooper & Warland, 2019; Lathrop et al, 2018; Nutter et al, 2014). Using the Childbirth Experience Questionnaire (CEQ) Lathrop et al (2018) found that women using water immersion in labour had the highest levels of satisfaction in comparison to conventional birth including those who have chosen to use epidural pain relief ($p < 0.001$) (Lathrop et al., 2018). Cooper and Warland (2019) have identified that women who experienced a water birth agreed that they had a positive birthing experience at significantly higher levels than those women who used water immersion for labour only (85.8% compared with 42.9%, $p<0.001$). This aligns with research by Lewis et al. (2018) who identified that women who had planned a water birth but exited the pool prior to birth were four times more likely (16% compared with 4%) to describe their labour using terms coded as distressing or enduring (for example: intense, hard, challenging) when compared with women who remained in the water to birth.

Barry et al. (2020) undertook a prospective cohort study with 380 low-risk women, half of whom used water immersion, birthing in a maternity hospital in Ireland between 2016 and 2019. The women who used water in labour were significantly more likely to report positive birth experiences compared to the ‘standard care’ group. Using the Childbirth Experience Questionnaire (CEQ) the women in the water cohort reported having more positive ($p < 0.001$) and less negative ($p = 0.002$) memories than women in the standard care cohort. The women

in the water cohort also scored significantly higher on feeling strong ($p = 0.002$), feeling in control ($p= 0.017$), having freedom of movement ($p<0.001$) and autonomy over their birthing position ($p<0.001$). For the women within the water cohort who birthed in the water they reported feeling less pain ($p=0.022$) and feeling more secure ($p=0.038$) than the women in this cohort who used water for labour and then birthed out of the water.

Cooper and Warland (2019) surveyed 740 Australian women who had used water immersion during their labour and/or birth regarding their experiences of water immersion. Using Likert scales the participants selected 'entirely agree' regarding the following statements: that they would recommend water immersion to others (85.54%), they felt safe (80%), they had a positive birth experience (72.7%), water immersion was soothing (72.02%), and they were able to move freely (71.35%). Eighty-six percent of women who used water immersion for birth entirely agreed that they had a positive birth experience compared with 43 percent of women who used water immersion during labour only. Overall, there was a highly statistically significant increase for all benefits researched in the group who used water immersion in labour and birth ($p<0.001$).

Women's decisions to use water immersion in labour can also be influenced by a previous positive experience of using water immersion or by a previous medicalised birthing experience perceived as negative by the women (Clew et al., 2020; Fair et al., 2020). Women, both with low risk and clinically complex pregnancies, have reported using water immersion as a strategy to support physiological birth and minimise the risks of the 'cascade of intervention' (Fair et al., 2020; McKenna & Symon, 2014; Richmond, 2003; Ulfsdottir et al., 2018). Low risk nulliparous women who used water immersion in labour experienced fewer birthing interventions when compared with women not using water immersion (Lukasse et al., 2014). These findings align with the Aotearoa New Zealand based research by Maude and Foureur (2007) in their interviews with five women who used water immersion either at home or in a hospital setting, who described being in water as creating their own space which insulated them from unwanted interference or intervention.

Most research which examines water immersion uses some manner of exclusion criteria to restrict access to water immersion to women with low-risk pregnancies. I have found no

research to support or inform these restrictions on water immersion and the variation amongst the exclusion criteria suggests that these are identified using authoritative opinion rather than a solid evidence base. Policies regarding water immersion focus on potential or possible risks of water immersion, whereas medical interventions that are introduced into practice are generally based upon a risk management perspective of potential benefit (Cooper et al., 2019). Cooper et al. (2019) researched how water immersion guidelines in Australia were informed and developed. Philosophical perspectives of water immersion tended to shape how the available current research was interpreted, either positively that there is no current evidence of an increased risk to women and babies, or negatively in that there is not enough evidence to empirically prove the safety of water immersion (Cooper et al., 2019). Qualitative research into the experiences of women and midwives with water immersion were not highly valued within the development of practice policies (Cooper et al., 2019). Observational research was generally considered to be low quality evidence which allowed for the interpretations of medical practitioners, namely obstetricians and paediatricians, to dominate in using professional opinion to inform guidelines (Cooper et al., 2019).

Theories of risk in pregnancy

"Normality, complication and risk are central concepts in modern maternity care. The boundary between normality and complication is not fixed but is socially and culturally defined and changes over time" (Kringeland & Moller, 2006, p. 190). Within the literature there is no consensus of the definition of a high-risk pregnancy (Lee et al., 2016a). A high-risk pregnancy could be considered as "one in which there exists some biomedical factors, usually relating to the mother's present or previous medical condition or obstetric history, which could put the baby's or mother's life or long-term wellbeing at risk" (Behruzi et al., 2010, p. 50). Risk during pregnancy is measured and predicted within the maternity system using a range of assessment strategies including personal or professional experience, research, knowledge of pathophysiology and technological surveillance (Bisits, 2016; Chadwick & Foster, 2014; Jordan & Murphy, 2009; Kringeland & Möller, 2006). The continuing developments of risk assessment and prediction have resulted in increased numbers of women being identified as high-risk for a wide range of low probability events (Bisits, 2016; Jordan & Murphy, 2009). Bisits (2016) suggests that every stage of pregnancy can now be characterised by a number of risks of an adverse outcome. Within Skinner's (2011) research about women being cared for

by LMC midwives in Aotearoa New Zealand 35% of women had a consultation with an obstetrician at some stage in their childbearing process indicating there had been a 'risk' of some type identified during their childbearing journey.

Experience of high-risk pregnancy

Being identified as high risk or complex during pregnancy can have a significant impact on women's experiences of pregnancy. Women who have been identified as having pregnancy complexity or being high-risk have increased feelings of stress, anxiety and frustration along with reduced feelings of control (Currie & Barber, 2016; Isaacs & Andipatin, 2020; Mirzakhani et al., 2020). Women personally view their risk status during pregnancy in a multifaceted way which can be influenced by social and cultural factors. These include previous experiences, family history, previous health care experiences as well as information from health professionals and at times assess their risk status differently from the ways that health professionals do (Chadwick & Foster, 2014; Jackson et al., 2012; Jordan & Murphy, 2009; Lee et al., 2012; Lee et al., 2014; Lee et al., 2016a; Lee et al., 2016b; McKenna & Symon, 2014). Aotearoa New Zealand-based research exploring how midwives work with women with identified risk factors found that midwives understood that the woman's decision making was influenced more by how she viewed her clinical complexity and risk status, rather than the scientific evidence relating to her clinical complexity (Skinner, 2011). While being labelled as high-risk can result in more negative feelings during pregnancy, the majority of women with high-risk pregnancies still desire to be active and informed participants in decisions throughout their childbearing journey (Harrison et al., 2003). Harrison et al. (2003) undertook qualitative research interviewing 47 women with hypertension during pregnancy or threatened pre-term labour in one Canadian city between 1998-1999 regarding their pregnancy and their satisfaction with their participation in their pregnancy decision-making. They found that two thirds of the women wanted to be an active participant in their pregnancy decision-making and a third of the women preferred to have a passive role in their decision making. Women were satisfied with their role when there was congruence between the role they desired and their experience of pregnancy decision-making. Communication which supports the woman's involvement in informed decision-making during pregnancy is an important

factor for improving the woman's satisfaction with her experience (Harrison et al., 2003; Mirzakhani et al., 2020).

Women have found that within certain clinical circumstances their options during pregnancy and birth may be restricted due to perceived risk factors (McKenna & Symon, 2014). The power dynamics within the hospital system can mean that health professionals definitions of risk can be prioritised over the woman's own beliefs and understanding about her own level of risk (Lee et al., 2016b). Women can feel that because of their 'high risk' status, they then need to manage the responses to this from health professionals, family and friends (McKenna & Symon, 2014). At times women identified as having high risk pregnancies will make choices that sit outside current hospital or service policies and guidelines which align with their own beliefs of what will support a positive pregnancy outcome (Jackson et al., 2012; Keedle et al., 2015; Lee et al., 2016a). These choices can be linked to their own beliefs about birth and managing potential risks related to the birthing process whether they are risks related to health outcomes or their social, cultural and emotional wellbeing (Chadwick & Foster, 2014). Women who make such decisions can feel that they face censure, intimidation and coercion using guilt and fear within the hospital system and have described the process of trying to negotiate their choices as being re-traumatising (Keedle et al., 2015; Lee et al., 2016a). These concerns and experiences can influence women to choose to birth 'outside of the system' with homebirth or freebirth rather than to try to negotiate choices that meet their needs within in the hospital system (Jackson et al., 2012; Keedle et al., 2015).

Water immersion during high-risk pregnancy

There is a paucity of research specifically about the experiences or outcomes of women with complex pregnancy using water immersion within the hospital system.
Within the literature review I have identified two research reports which explore the experiences of women with complex pregnancy in using water immersion in labour. Townsend et al. (2018) presented qualitative research exploring the experiences of 24 women in Australia in negotiating for and using water immersion during their subsequent labour following a caesarean section at the Australian College of Midwives conference. The women in this research described their caesarean sections as traumatic and entered their subsequent

pregnancy with a strong determination to have a different experience of birth. They identified that carefully selecting both place of birth and maternity care provider were important aspects in negotiating this choice. The negotiation process was experienced as challenging, but for those women who were successful in their negotiation, water immersion provided sanctuary, privacy and control which they described as life changing (Townsend et al., 2018).

McKenna and Symon (2014) undertook research regarding eight women's experiences of water VBAC within one Scottish midwife-led unit and found that women laboured and birthed in the water as a method of resistance to the medicalisation of birth and to reduce the chances of birth interventions. In this way the women also felt like they were protecting themselves from repeating a previous negative experience of birth and maximising the opportunity for choice and control within their labour and birth (McKenna & Symon, 2014). The women identified that water immersion was a choice that they needed to become informed about and to persuade the staff involved in their maternity care to support.

A small number of audits and studies have assessed maternal and neonatal outcomes with water immersion for women with complexity in pregnancy, most commonly exploring outcomes for VBAC with water immersion. I have accessed an abstract for a retrospective cohort study exploring outcomes of water immersion during the second stage of labour but have been unable to access a full article, presentation or publication (Valarazo et al., 2019). This study included women with singleton, cephalic presentation term pregnancies between 2013 and 2017. Within subgroup analysis, VBAC rates were higher in the water immersion group when compared to the control group ($p<0.001$). It also demonstrated vaginal birth rates were increased ($P<0.001$) and caesarean section ($p<0.001$) and operative delivery ($p<0.001$) rates were lower in the water immersion group compared to the control group. Neonatal admission rates were not significantly different between the two groups ($p=0.99$). Without access to further details of this research it is difficult to provide analysis of the significance of these findings.

Garland (2006) undertook an audit of a risk assessment process relating to whether waterbirth is a ‘safe and realistic’ option for women undertaking a VBAC between 2002-2004 in a single hospital in the United Kingdom. The outcomes of this audit identified eighty women where

VBAC waterbirth was considered a ‘low risk’ option, but within the final audit only fifteen women used water immersion during labour and four remained in the water to birth. The outcomes for these women were not separated from the outcomes of the remaining women who either did not use water immersion or moved from the pool prior to birth. Overall, the outcomes for the eighty women included in the audit were a 59% spontaneous vaginal birth rate and a 21% instrumental birth rate. With such small numbers of women using water immersion and no sub-group analysis of the women who used water immersion in first stage or during birth, it is difficult to interpret these findings.

Sellar (2008) undertook an audit of water birth outcomes for women having a VBAC at an ‘alongside’ midwifery led unit in England between 1996 and 2008. During that time fourteen women intended, at the start of labour, to water birth and ten women (71%) had a normal vaginal birth in the water. Additionally, two women (14%) birthed spontaneously out of the pool, one woman (7%) had a forceps birth, and one woman (7%) had a ventouse birth. It was not noted whether these women had used water immersion during their labours. There were no repeat caesarean sections for any of these women and labour durations, perineal damage and neonatal Apgar scores were “no different from any other normal delivery” (Sellar, 2008, p19). The women in this audit provided positive feedback regarding their experience to the midwives involved.

Lim et al., (2016) completed a comparative study which compared waterbirths and conventional vaginal births between 2010 and 2013 at the National University Hospital in Singapore which offers obstetrician-led water births with continuous fetal monitoring. The exclusion criteria of this study were limited in comparison to other studies which resulted in women with complexity being included within the waterbirth group. The waterbirth group, of 118 women, included women with pregnancy complexity including being Group B Strep positive, having pregnancy induced hypertension or pre-eclampsia, gestational diabetes or were undertaking a vaginal birth after caesarean. The outcomes of this study found there were no significant increases in adverse outcomes (postpartum haemorrhage, third/fourth degree tears, maternal or neonatal infections) for mothers or babies. Three women of the 118 in the waterbirth group experienced retained placenta and no women in the control group did, although this difference was not significant ($p=0.247$). The water birth group had significantly

shorter labours (267.5 minutes compared to 420.7 minutes, $p<0.05$). There was also a significant difference in perineal damage including episiotomy, with women in the water birth group more likely to have an intact perineum, first or second-degree tear and less likely to experience an episiotomy ($p<0.001$). The studies above indicate that with the limited research currently available regarding water immersion in the context of high-risk or complex pregnancy and birth, it appears that water immersion has a positive impact on a number of outcomes.

Maude and Kim (2020) undertook a prospective observational study of water immersion within one district health board in Aotearoa New Zealand. They identified that of the 1517 women whose information was included in the research, 284 (18.7%) were identified as having risk factors in their current or previous pregnancy including being Group B Strep positive, having had a previous caesarean section and having their babies identified as being growth restricted. For the women within this sub-group who gave birth with a gestational age of less than 36 weeks or more than 42 completed weeks of pregnancy it was noted that they water birthed with no maternal or neonatal complications. No further outcomes were noted for the sub-group of women who had risk factors.

Summary

The decision to research the experiences of women with complex pregnancy in negotiating for and using water immersion within the hospital setting first required a comprehensive review of the literature to position this research within what is already known. This literature review has demonstrated that while there is a growing body of knowledge regarding the experiences of low-risk women when using water immersion in labour, there is little information about women with complex pregnancies. The experience of being identified as high-risk can limit women's choices in pregnancy and be associated with negative emotions. With increasing technological advances and screening within maternity care increased numbers of women are being identified 'at risk'. Internationally, women with high-risk pregnancy who wish to make choices outside of the dominant biomedical model can find the process of interacting with 'the system' challenging and coercive and may choose to birth at home or freebirth to avoid these

negative interactions and potentiate a positive birthing experience. While the extant research was predominantly based in Australia, which has a different maternity system than Aotearoa New Zealand, there may be similarities within women's experiences of making choices outside the guidelines.

Women who choose to VBAC using water immersion have used water to resist the medicalisation of their births and maximise their opportunities for a positive physiological birthing experience. They have often come into their pregnancy with a determination to have a different experience of birth than when they had a caesarean section. Within one New Zealand maternity setting, research has shown that women with risk factors in their current or previous pregnancy are using water immersion during labour and birth.

Much of this literature has emerged internationally and while there are similarities to the Aotearoa New Zealand context there are also some significant differences in maternity care provision. As a result of my literature review, I have found a dearth of literature regarding the experiences of women with complex pregnancy negotiating for and using water immersion in labour within the hospital system in Aotearoa New Zealand.

The aim and objectives of this research will contribute to this space within the literature by building an understanding of

1. women's motivations to negotiate water immersion
2. women's experience of negotiating this option with their caregivers
3. women's experience of using water immersion in complex labour

CHAPTER FOUR - METHODOLOGY

Underpinning philosophical approach to research

The aim of this research was to develop an understanding of the influences, facilitators and barriers for women who chose to use water immersion for labour and birth when they were labelled/identified as being clinically complex, as well as to explore their experience of using water immersion in labour. I chose to use qualitative inquiry for this research topic because rather than seeking to measure and discover a single 'truth' of using water immersion in a clinically complex pregnancy, the aim was to gain insights into the women's' realities through their own words and descriptions to develop an understanding of their choices and experience (Milne & Oberle, 2005; Sandelowski, 2000). Using a qualitative approach to explore and answer this research question allows us to hear the "personal voice of the individual, with unique perspectives and idiosyncratic understandings of the world" (Salmons, 2016, Preface).

Smythe (2012) suggests that an interpretive descriptive approach is particularly suited for a research project such as this which needs to be restricted to an appropriate scope of a master's study. This approach aims to create insight and understanding of the participants' experiences with rich detail and attention to context, without applying in-depth interpretation to the words and phrases used by participants (Milne & Oberle, 2005). The interpretive descriptive approach acknowledges the complex constructed realities that lie within personal experiences while recognising that, within groups, there will be some shared realities within human experiences (Thorne et al., 2004). This approach aligned clearly with the aim of this research of understanding the influences, facilitators and barriers for women who chose to use water immersion because "it provides factual responses to questions about how people feel about a particular space, what reasons they have for using features of the space, who is using particular services or functions of a space, and the factors that facilitate or hinder use" (Colorafi & Evans, 2016, p. 17).

Qualitative inquiry is based upon asking the research questions, hearing what participants explained as their experiences, beliefs and realities and then analysing that data, which Smythe

(2012) describes as a strength of this 'straightforward' research approach. This analysis of the data remained close to the participants' own words and descriptions, rather than applying specific interpretative theories such as phenomenology to the data collected (Colorafi & Evans, 2016; Sandelowski, 2000). The words used by participants are considered a medium for describing their views, experiences and beliefs about a situation and context, rather than the language itself being interpreted by the researcher for deeper meanings (Sandelowski, 2000). The aim of an interpretive descriptive inquiry within the health setting is to develop a "coherent conceptual description that taps thematic patterns and commonalities believed to characterise the phenomenon that is being studied" (Thorne et al., 2004, p. 4).

The qualitative descriptive inquiry and the related thematic analysis were approached using a framework of constructionism to understand the reality of the experience from the participants' point of view (Braun & Clarke, 2006). Constructionism recognises that there is no single truth related to a lived experience, but that the experiences of participants are shaped by the way they interpret and make sense of these events, and the contexts in which the events take place (Liamputtong, 2013). Constructionist research is concerned with both the events or situations happening for the participant, but also how these events are brought about, including the beliefs, interactions and social systems that have contributed to the occurrence (Silverman, 2013). The use of a constructionist approach for this research aligns with other research regarding women's perceptions of risk during pregnancy as women in pregnancy construct multiple complex meanings for risk which are not necessarily aligned with the biomedical definition of risk (Chadwick & Foster, 2014).

Research Design

This section will outline in detail the decisions that were made regarding research design regarding the sampling methods and methods for recruitment. The use of semi structured interviews as a method of data collection will be reviewed, along with the method of thematic analysis. The ethical and cultural aspects which were considered as a part of this research will also be discussed.

Sampling methods

Sampling for this research was purposive criterion sampling, to seek participants who have had the experience of negotiating for and using water immersion during a clinically complex pregnancy and/or birth (Liamputtong, 2013). Criterion sampling involves setting a defined list of inclusion and exclusion criteria to seek participants who have experience of the phenomenon and can contribute a rich level of detail and experience desired for qualitative research (Liamputtong, 2013). For this research the inclusion and exclusion criteria were selected to optimise the opportunity to speak to women who had recent experience relevant to the research topic and were able to share a level of detail relating to this experience within the interview setting.

Inclusion criteria

The inclusion criteria for this research were that the women;

- met the criteria under Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (MOH, 2012) for the recommendation of a consultation, referral or transfer of care in relation to pregnancy or birth
- used water immersion during their labour and/or birth
- gave birth within the last 12 months in a hospital setting
- was able to converse in English

The exclusion criterion was that the woman had;

- received maternity care from the researcher

As previously discussed in the Chapter Two, the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) are a set of nationally consistent guidelines which have been developed and negotiated within a multidisciplinary framework (MOH, 2012). The ability within these guidelines to decline a recommended referral is why the inclusion criteria relates to meeting the criteria under the Referral Guidelines rather than undertaking a consultation or transfer of care.

Recruitment

Social media was chosen as the platform to reach potential participants in recognition of the increasing levels of interaction and communication via social media for potential participants, and the opportunities this brings to reach and interact with a wide range of potential participants (Lunnay et al., 2015). I considered that with the increasing use of social media this represented the best available method of reaching participants from different locations within Aotearoa New Zealand. A range of Facebook pages were used to disseminate the information about the research with the intention that this would support the inclusion of women from a range of ethnic, social and geographical circumstances. First Digital (2015) have reported on Facebook commissioned research by Neilson Research into social media usage which indicated that in 2015 that 82% of mothers in Aotearoa New Zealand accessed Facebook daily. The demographic age groups 18-24 years and 25-34 years also had the most Facebook users (First Digital, 2015). Although commissioned by Facebook and therefore self-interested and self-serving, this research does provide an indication that Facebook is widely used, which provides a useful platform for trying to reach potential participants.

One identified challenge of using social media platforms to reach potential participants was that there are differing use of social media platforms across different sectors of society and this can inadvertently influence the final research participants, particularly if technology usage is influenced by socio economic or cultural factors (Lunnay et al., 2015). This research aimed to reach women in Aotearoa New Zealand who had had babies within the past 12 months. It is acknowledged that not all potential participants would be interacting with Facebook, which was the medium being used for recruitment of participants. Within Aotearoa New Zealand there is evidence of a digital divide in internet access within different ethnicities, with Pacific people historically being less likely to access the internet (80%) when compared with Asian (99%), Pākehā (92%) or Māori (87%) people, though these differences were reduced within the younger age demographic due to the use of mobile devices for internet access (Smith et al. 2016). I recognised the potential for limitation in the ability to attract all potential participants

equitably by using social media but decided it was the most equitable tool available for reaching a wide range of potential participants.

Participants were sought via a flyer posted to pages on the social media platform Facebook (Appendix A). This flyer introduced the research and the inclusion criteria and provided a link to a private Facebook page established for the purposes of this research. On this Facebook page the participants were able to view information regarding the research and my contact details. The research-specific Facebook page and related messages were password protected and only accessible by me. The posts also listed my institutional email address for potential participants to email their interest.

Posts with the 'research flyer' were originally shared on the Facebook pages listed below which were anticipated to provide the best reach to a cross section of potential participants.

- Oh Baby
- Natural parenting magazine
- Kiwi Families
- Homebirth Aotearoa New Zealand - this group has been included as, at times, women who planned to birth at home change birthplace due to clinical complexity, so may have experience relevant to this research
- The Mums Collective
- Kiwi Mama's

I acknowledge that with the nature of social media the original Facebook flyer was able to be shared by Facebook members either privately or publicly within a range of settings. There were a number of potential participants who made contact by commenting with responses on Facebook posts. For these people I requested that they send me a Facebook message and provided my email address as an alternative again in my response to their comment. Details of the number of women involved in this part of the recruitment process are provided in the introduction of the Findings Chapter.

On receipt of an email or Facebook message from a potential participant indicating interest, I responded using the same communication method with the Participant Information Sheet (PIS) (Appendix B) and a sample consent form (Appendix C) attached. The potential participant then emailed or messaged back to confirm their interest at which stage I arranged a phone call to discuss the research project, inclusion criteria and participant information sheet. This phone call was also an opportunity for potential participants to ask any questions about the research. During this phone call the participants were offered to have a Māori research assistant conduct their interview, as had been identified in the PIS, however no participants availed themselves of this offer.

For potential participants who indicated that they were happy to proceed, an appropriate interview time and interview method (face-to-face or online) was arranged. All the participants chose to have interviews completed using online technologies, even when due to location a face-to-face interview was possible. Immediately prior to interview, the consent form was reviewed again, both verbally and by using the 'Share Screen' function of Zoom, and if the participant consented to take part in the interview, then they signed the consent form manually, and emailed the consent form (or a copy/photo of the consent form) to me from their personal email. Four participants chose to return the completed consent form by post. At the conclusion of the interview basic demographic data was collected which was limited to geographic location, age, ethnicity, parity and self-defined specific complexity of pregnancy.

Sample size

When making decisions about the sample size for this research I followed the philosophy of ensuring that the sample was "large enough to obtain enough data to describe the phenomenon of interest to be able to meet the study objectives" (Shaw et al., 2019, p. 740). This sample size of seven women was adequate for the scope and aims of this research. The quality of data was reliant on participants having the capacity to share their deep, rich lived experience of the area of research, which in this research was achieved by purposive sampling with clear

inclusion and exclusion criteria (Vasileiou et al., 2018). This led to the inclusion of a relatively homogenous participant population, which combined with a carefully focused research question does mean that the number of participants can be reduced compared with a broad research question and a heterogeneous group of participants (Vasileiou et al., 2018).
With this Masters research being a 'time-limited' research project there was no possibility of open-ended continued data collection until theoretical saturation had been achieved (Mason, 2010). A pragmatic decision was made when the initial recruitment strategies engaged seven women who met the inclusion criteria and had the depth of knowledge of the research topic to share that this would be the sample size for this research. Using open-ended interview questions which allow for an in-depth exploration of participant experiences means that smaller sample sizes are able to identify the most prevalent themes, with larger sample sizes being ideal for the inclusion of the less prevalent themes as well (Weller et al., 2018).

Data collection

Semi-structured interviews

Semi-structured interviews were chosen for this research to allow me to learn about the participant's own experiences, beliefs and lived reality in their own words using their own individual interpretation of events (Serry & Liamputtong, 2013; Silverman, 2013). Using interviewing as a research tool allowed me to understand the 'insider perspective' of the participant and explore their hidden perceptions (Serry & Liamputtong, 2013). Semi structured interviews allowed for more spontaneity and exploration of ideas, themes and issues as they arose within the interview, than in a more structured, fixed survey style of interview (Serry & Liamputtong, 2013; Silverman, 2013). Unlike a structured interview, where there are standardised questions being asked in a consistent way to all participants, a semi structured interview supported the woman to take the lead with a more spontaneous sharing of her experience, while also allowing some guidance over the content and process of the interview (Steen & Roberts, 2011). The data collected from the semi structured interviews was both descriptive and exploratory, providing the detail and insight into women's experiences which is necessary within qualitative research (Steen & Roberts, 2011). A small number of interview

questions were used to prompt and progress the content of the interview, while allowing space to support the participants to expand upon their answers to the questions.
Specific questions to support the semi structured interviews were:

1) What made you interested in using water immersion in labour?
2) What did you discuss with health professionals (midwives/obstetricians) about using water in your labour?
3) What supported you in making this choice and using water immersion in labour?
4) How did you find using water immersion during your labour?
5) Were there any challenges to choosing or using water immersion during your labour?

Interviews were undertaken using the synchronous online meeting platform Zoom allowing both visual and verbal communication and simultaneous recording of the interviews.

Online format for interviews

Within this research project online technologies were one of the possible avenues for undertaking the interviews, with face-to-face interviews where possible geographically or preferred by the participants. These interviews were recorded, and the recording was stored on a password protected system only accessible to me and files deleted once transcribed and member-checked by the participants.

Using online technologies as an avenue to undertake research allowed access to a larger pool of potential participants, allowing greater geographical variation as well as reaching 'hard-to-reach' participants or those who may find it challenging to participate in traditional research settings (Salmons, 2016). Geographical variation was important within this research topic because of the potential variations in approach between individual health professionals and maternity facilities. Specific practices in different geographical locations have the potential to influence the decision making of women and using a specific geographical location (such as one particular hospital, city or DHB facility) could result in data which represented location-specific interactions and decision-making processes, but I was interested in seeking a broader range of perspectives.

Using videoconferencing technology allowed for the synchronous sharing of information and responses throughout the research process similar to traditional face-to-face interview methods (Salmons, 2016). This potentially made the research process more convenient and less stressful for participants due to the flexibility in interview location and timing, and participants being able to balance their participation with the needs of their whanau (Hanna & Mwale, 2017; Salmons, 2016). It also allowed the development of a private space for meaningful communication and interaction, including the sharing of non-verbal communication, which is also similar to more traditional interview settings. Using an online medium for face-to-face interviews can support participants to share and discuss personal details, as they are often based within their private space and not needing to share this information in an unfamiliar location or in person (Hanna & Mwale, 2017). Participants are also able to control the setting for the interview without needing to invite an interviewer into their home, which for some participants can feel too personal and invasive. The participant having more control over the interview timing and setting may also result in participants feeling more comfortable with the process, leading to more openness when responding to questions and to "the generation of more nuanced and detailed data" (Hanna & Mwale, 2017, p. 261).

Online interviewing can be impacted by the common challenges of using technology. Issues with connectivity can result in interviews that are stilted or interrupted, which may significantly impact the quality of the interaction between the interviewer and participant and diminish the quality of the data collected (Hanna & Mwale, 2017). There is also a limited ability for the interviewer to understand the setting where the participant is located. This leads to the possibility that there are interruptions, other people present, or other online tasks being undertaken that could impact on participant engagement with the interview process (Hanna & Mwale, 2017). During the interviews for this research participants took part from a variety of locations within their homes and at times providing care for their infants. During one interview there was a short period of interruption lasting approximately 30 seconds, due to the weather interfering with transmission at the participant's location.

Prior to the interview commencing the participant was reminded that they could discontinue the interview at any stage if they wanted to, to either pause or stop the interview. They could

also decide at any stage that they no longer wanted to participate in the research. This information was also present on the consent form which was reviewed and discussed prior to the interview commencing. Interviews varied in length from 13 minutes to 45 minutes. The interviews were recorded in two ways, firstly the online meeting was recorded, capturing both the visual and verbal communication with a backup recording using password-protected cellphone of solely the verbal communication in case there were any issues with the online recording. Following the interview, participants were asked to consider whether they would like to use their own first name or a pseudonym for the inclusion of their information within the data. The majority of participants decided at this point which they would like, with one participant considering this and emailing with a decision at a later date.

Transcription

I transcribed the interviews verbatim in the weeks after they had been completed, using the video recording of the interview to support the inclusion of verbal and non-verbal information. This manual transcription was a time-consuming process but did ensure deep familiarity with the data from the process of being immersed within it for that length of time. This transcription included the words spoken by the participant with the addition of any nonverbal responses such as emotional reactions or gestures which indicated further expression or emphasis on the words being spoken. The draft transcript was then sent to the participants to check the accuracy of all the information included and to ensure that the participant was happy for the inclusion of all the information they had shared during the interview. At this stage I confirmed with the participants that they were comfortable with the decision they had made regarding the name used for the inclusion of their data within the research.

Thematic analysis

Inductive thematic analysis was chosen to analyse the data from participant interviews. Inductive analysis was selected because this is a topic area which has not been widely

explored previously, and there are few current theories to understand this area of women's experiences. Inductive thematic analysis of the semi-structured interviews identifies themes using the rich detail within the participant data and supports the development of new understandings and insights into an area (Braun & Clarke, 2006; Elo & Kyngäs, 2008). During analysis I sought to understand the meaning and explanations within the description of events so that the identified themes would "illuminate their [participant experiences] characteristics, patterns and structure in some theoretically useful manner" (Thorne et al., 2004, p. 3).

I used a systematic approach to identify, describe and organise patterns and themes within the data to facilitate the generation of understanding and insight. Thematic analysis for this research was based upon a framework of six phases beginning with data familiarization (Clarke & Braun, 2016). This process commenced with repeated listening to recorded interviews followed by my manual transcription of the data. The transcripts were also returned to the participants for member checking, to ensure that they accurately represented the words and intentions meant by the participant. Following this process, I read the transcript alongside another viewing of the original interview recording to ensure accuracy of both the verbal and nonverbal communication. This process of familiarisation then continued with repeated re-reading of the interview transcripts. During these re-readings brief notes were added to the transcripts regarding aspects which stood out to me.

Following data familiarisation, I commenced the process of coding. This involved systematically coding the data to ensure that all data relevant to the research question had been coded. Data coding was undertaken on Word documents of the interview transcripts and included highlighting the specific words and phrases in the transcript and using the 'Comment' function to note the code associated with that particular section. Once this process was completed for all transcripts, I reviewed the transcripts again to ensure that my coding remained accurate and consistent throughout all the transcripts. To enable peer debriefing about coding accuracy the coded transcripts were sent to my research supervisor for review and discussion. The mutual discussion arising from this ensured that the coding process was thorough and that a broad range of codes were identified within the data.

Once the initial process of coding was completed, I grouped the codes using abstraction to gather codes with similar meanings. Abstraction is the process of analysing the codes, considering and organising them into broader levels of themes by collating the relevant sections (Braun & Clarke, 2006). At the completion of the abstraction process, I had identified higher order themes from grouping the similar codes. This was achieved by creating a document of the segments of data related to the codes and grouping data which explored or discussed similar ideas or concepts together. This created a range of theme groups, which were then grouped with other themes to identify the higher order themes.

This process required me to frequently revise both the abstracted groups of code and the higher order themes to ensure they continued to accurately reflect the words and meaning of the participants within the original interview data. This was achieved by a process of reviewing the original transcripts, which included no detail of codes or themes. This process of revision, individually and with my research supervisor, ensured that the themes identified continued to accurately reflect the ideas and meanings within the participant transcripts. I then clarified the higher order themes by writing a paragraph to describe and explain the integral aspects of the theme. This process of defining the themes in more detail ensured that the integral aspects of the participant experiences had been included within this group of themes and that overall, the themes identified accurately represented the data that had been shared within the research.

The final step of this process was to return to the original interview transcripts again to ensure that the themes identified aligned with the content of the original interviews. A part of this process was also carefully reflecting upon my role as a researcher to ensure that the themes identified did not reflect any of my priorities or beliefs around water immersion but were firmly rooted in the experiences of the participants. Once these themes had been identified the findings of the research were documented, expanding upon the initial themes and summary paragraphs to include more detail of the participant experiences. Table 1 provides an example of how some of the data was transformed into a theme.

Table 1: Example of theme development

Quote	Initial Code	Grouped Code	Theme
My midwife was just strong and said no, she doesn't want to be. We told them our history...and...and I made that call when I entered the hospital.	LMC midwife as an advocate of woman's decisions	Woman in position of decision maker with LMC midwifery support	Standing my ground – midwifery care that supports woman in her decision making
She had quite a broad span of knowledge and she sent me some articles about that glucose testing because that was the first thing. I was like "Nah, don't want that" and she was like "Ok, well here's an article" and I read it and was like well that kind of back's me up actually "	LMC midwife supporting woman's informed decision making		
She was fantastic. And she didn't even enter my space which I found really interesting. She said to me "I figured...:" at the end she said "I	A midwife who knows you	Being known-midwifery	
really picked up that you're a person who needs to go into your own space"		care that meets personal priorities	
I had brought it (water immersion) up with her in a few of our meetings before, it was kind of something that we'd always talked about. Yeah but, but to be honest she hadn't expressed any concerns, um, she was quite aware of the complications we'd gone through last time.	Midwifery support and understanding of woman's priorities		
Because I knew my midwife and, I think once I was having baby it felt like a really womanme thing	Importance of continuity of care and birth as a 'woman thing'		

Since then I'm like you have to, have to search for the right team…even for this baby I got a midwife in (Town Name) and even at 12 weeks I changed to the one in City 2 and...um… I just wasn't comfortable with how...how medical she was in regards to birth and she had full books too and she was always late and unorganised and I thought "No I need my team to be, um, the right fit for me ."	Seeking midwifery care that aligns with philosophy of birth	Seeking a midwife ally	

Ethical and cultural considerations

Ethical approval for undertaking this research was granted by the Otago Polytechnic Research and Ethics Committee and was granted on 8th April 2019 (Appendix D). The Ethics application process considered all the cultural and ethical aspects discussed below and the approval is reference #001.

Te Tiriti o Waitangi

For this research to be a relevant reflection of women's experiences in Aotearoa New Zealand it was particularly important that the voices of wāhine Māori, as tangata whenua, be heard and included. Wāhine Māori make up a quarter of pregnant women in Aotearoa New Zealand year on year and it was important to ensure that within this research the voices of wāhine Māori were included, at minimum, to a similar level as within the birthing population (MOH, 2020). This was not about trying to ensure that this research was representative and therefore generalisable as I recognise this is not the aim of qualitative research. This aim was reflective of the importance of the inclusion of the voices of tangata whenua as a part of the responsibilities inherent within Te Tiriti o Waitangi and health research.

It is well recognised that the experiences for Māori of receiving and negotiating care within the health system can be an area of inequity, and it is valuable to find out if this is also the experience of Māori pregnant wāhine in Aotearoa New Zealand (Ellison- Loschmann &

Pearce, 2006). In this area of research, the concern of equity of experience was particularly relevant as there are a number of ‘risk factors’ in pregnancy that wāhine Māori experience in a greater proportion than women of other ethnicities (Reid et al., 2018; Perinatal & Maternal Mortality Review Committee, 2018). This means wāhine Māori are more often in a position of receiving maternity care in a 'high risk' context.

Midwifery is a profession where partnership between women and midwives is embedded in the frameworks within the profession, and these priorities were respected and included within this research. The principles of partnership, participation and protection within te Tiriti o Waitangi were prioritised within this research project. Throughout the research and interview process I strove to prioritise the development of relationships in which wāhine Māori would hopefully feel they were in a position of partnership with me. This included time at the beginning of the interview to share who we each were and developing a connection prior to starting the interview and expecting the woman to share her personal stories and experiences with me. The interview process was undertaken in a way which included the sharing of stories where appropriate, discussion, and the direction was dictated by the areas of the woman's story which she felt comfortable exploring. From the perspective of this research, the principle of protection is about ensuring the research process, interviews and findings were undertaken and will be disseminated in ways which protect the mana of the wāhine who have taken part and respects the value of the experience that they have chosen to share.

I also ensured that the research experience for wāhine Māori demonstrated the importance of Tika and Whakapapa, as discussed in Te Ara Tika Guidelines (Hudson et al., n.d). There was an emphasis on kānohi ki te kānohi methods of data collection wherever possible to support the establishment of relationships between myself and the wāhine. It was offered within the participant information and introductory participant phone call that a Māori research assistant could undertake interviews if this was preferred by the wahine Māori and their whanau, to ensure that the interview process felt like a safe space to share personal stories. The use of semi structured interviews within the research design ensured that there was time and space for wāhine to tell their story in their own way, with the use of minimal prompting questions to support this process. This often included the sharing of background and whanau information to provide context to the pregnancy and birthing experience being discussed. It was also made clear within the research information that all participants were encouraged to bring whanau or

support people to their interview if they chose, which was aiming to recognise the importance of relationships and a safe space for sharing personal stories. Simple te reo Māori was used within participant information and consent forms where possible.

Cultural consultation

Consultation on the ways that this research could be best undertaken to include the experiences of wāhine Māori was undertaken via email discussions with the Kaitohutohu Office at Otago Polytechnic. The final recommendations were that I ensured that the social media pathways chosen for recruitment are appropriate for reaching wāhine Māori. This was managed within the research by ensuring the inclusion of Kiwi Mama's which was a Facebook parenting group with a focus on wāhine Māori, and whānau. The advice and approval from the Kaitohutohu Office is included in Appendix E.

Ethical considerations

Timing of interviews

I chose to undertake the interviews postnatally to ensure that the experience of taking part in the research did not influence or alter the women's own decision-making prior to labour. I had considered the benefits of interviewing during pregnancy to provide a more detailed insight into the experiences of choosing and negotiating for water immersion in a clinically complex labour but ultimately decided that the possibility of influencing the women's own thoughts, feelings and decision-making processes was too significant.

Voluntariness

Participation in this research was voluntary with participants responding to a social media request to participate. Women were not financially rewarded for participating. Approaching women directly through social media was chosen to minimise the potential influence of approaching via health professionals such as midwives and the potential sense of obligation that could have been associated with this.

Confidentiality and anonymity

All data was anonymised using pseudonyms selected by the participant, or if the participant preferred, by using their first name only and removing location specific details within the interview transcript, to ensure that women's identities are protected throughout the dissemination of the research. Interview transcripts were stored within a password protected storage system only accessible to my research supervisors and myself. The primary data will be destroyed seven years following the completion of the research project. As the researcher I undertook the transcription of interviews myself which further assured confidentiality.

Ability to withdraw from research

Participants were able to withdraw from the research project at any time up until data analysis had commenced. This included being able to decline to answer any questions within the interview, to take a break or discontinue the interview at any stage, which was included in all participant information and discussed immediately prior to commencing the interview.

I recognised that there was the potential for upset and emotion as women discuss their birth experiences. Within this research setting this would have been managed, as needed, by offering to pause or cease the recording and interview if desired, providing a supportive presence during the moment and offering to be in contact within a few days to ensure the woman had not been negatively affected by her participation and offering information regarding locally accessible support services if needed. A copy of the Code of Consumer Rights and advocacy service pamphlets would have been emailed to the participant if requested though none requested this.

Considerations of the quality of this research

Qualitative research is appropriate for the exploration of lived experiences and requires rigorous methods to ensure the quality and usefulness of the results (Nowell et al., 2017). I have chosen to be guided by Lincoln and Guba (1985) in assessing this research against the standard of trustworthiness, using Lincoln and Guba's four criteria as a guide. Trustworthiness is a measure of rigour in qualitative research which works to ensure the quality of the research including confidence in the data collected, interpretation of the data and the methods included to ensure the quality of the study (Polit & Beck, 2014). It refers to the

"quality, authenticity and truthfulness of the findings of qualitative research" (Cypress, 2017). Lincoln and Guba (1985) have identified four criteria in relation to the trustworthiness of qualitative research.

The first of these criteria is the credibility of the qualitative research. Milne and Oberlie (2005) have identified that to be credible the research must be "directly related to its purpose" and the voices of the participants' lived experiences need to be freely heard and accurately portrayed. Credibility relates to the accurate and truthful representation of the participants lived experiences (Cypress, 2017). Often a study is considered credible when readers can recognise the experience when reading the research and the 'fit' between the respondent's views and how they have been represented in the research is evident (Nowell et al., 2017).

Dependability is a further criterion from Lincoln and Guba and has been described as ensuring that the "research process is logical, traceable and clearly documented" (Nowell et al., 2017, p. 3). Research which is dependable suggests that another researcher would be able to replicate the study with similar participants in a similar setting (Cope, 2014).

The next criterion is how transferable the research is. Transferability relates to how generalizable the research findings are and whether readers would be able to assess their ability to apply the research findings to their own settings from the descriptions provided (Nowell et al., 2017). Providing a vivid picture of participant experiences with rich, detailed descriptions of the research participants, setting and contexts supports readers to assess whether the research findings are useful in their particular setting (Connelly, 2016).

The fourth criterion is the confirmability, which is the degree to which neutrality has been achieved within the research findings to ensure that they represent the data rather than any particular viewpoints or biases of the researcher (Connelly, 2016; Cope, 2014). This requires the researcher to demonstrate how the findings have been clearly derived from the data so that the readers of the research can understand how the conclusions have been drawn (Nowell et al., 2017). Below I have included a graphic representation (Table 2) of the key aspects of this research which demonstrate the trustworthiness, through the achievement of the four criteria of Lincoln and Guba as outlined above.

Table 2: Strategies to enhance quality of the research

Strategies	Application to the research
Thick, rich descriptions: detail provided regarding participants and their experiences along with detailed quotes from participants to support conclusions.	Thick, rich description provides key contextual information which support the findings of the research. This can also support readers to make decisions around the transferability of the research results as well as understand how the researcher drew their conclusions. to support credibility, transferability and confirmability.
Transcribing myself – completed transcription myself, when considered outsourcing transcription due to time requirements part way through the process I decided against this as I realised that it would mean I had been more immersed with some data than others.	Prolonged engagement with the data, returning to the interview transcripts repeatedly while undertaking thematic analysis and assessing higher order themes against the raw data supports credibility (Nowell et al., 2017).
Member Checking: transcripts were returned to participants prior to thematic analysis to ensure that they accurately reflected the experiences and descriptions provided by the participants.	Member checking ensured that the participants were comfortable with the information they had shared within the interviews and that the recording and transcription accurately represented their interview and the discussion within the interview. This process supports credibility within the research.
Reflexivity: reflecting on my role as researcher and that as a woman, midwife, feminist and mother I came with a range of	I maintained a journal throughout the research process which explored any ways that my beliefs may interact or influence the research process. This included considering strategies to best manage or minimise the

beliefs and experiences around birth that had the potential to influence the research.	impacts of myself as the researcher or to acknowledge where this had the potential to occur. This process was also supported in discussions with my academic supervisors.
Considerations of ethics	Ethical responsibilities of research ensured by the process of gaining approval of the Ethics Committee (Appendix D). Undertaking research in line with the process outlined in this application ensured research ethically undertaken.
Culturally competent research process	Consultation with the Kaitohutohu Office at Otago Polytechnic to ensure that the research was considering the responsibilities of research in Aoteaora New Zealand in relation to representation of the experiences of tangata whenua and Te Tiriti o Waitangi
Supervisor debriefing: discussion of research process, decision making and reviews of process of thematic analysis	Ensures that analysis process has been peer/supervisor checked throughout to review methodological decision making and accurate coding of data
Inclusion of participants from a variety of locations	Process of triangulation of using multiple sources to draw conclusions (Cope, 2014), which supports transferability by ensuring research findings are not specific to one particular location or hospital.

Reflexivity

Within this research project it was important throughout to consider my role as the researcher and the ways which I, as the researcher, could potentially influence the process of undertaking

the research and the research findings. I was aware that as a woman, midwife, feminist and mother that I came with a range of beliefs and experiences around birth.

As a midwife I have supported women with clinical complexity to use water immersion both inside and outside institutional birth settings. Having also worked within both LMC and core midwifery roles, I have experienced the impacts that being within birthing institutions can have on your midwifery self and the ways that you practice as a midwife. As a mother, I have used water immersion both inside and outside institutional birth settings and at times this choice has sat outside 'the guidelines'. Through this I also have some insight into my own experiences of making unconventional birth choices.

I was aware, that having had these experiences there was the risk that my personal understanding would 'flavour' the way that I heard and interpreted the experiences of the women in this research. To manage this, I have maintained a journal throughout the research process to support me in considering and reflecting on the research process and to firstly recognise and then to manage and minimise the impacts of myself as a researcher. Within this journal I explored my reactions and responses to the women's experiences, reflecting on particular aspects where I felt similarity or connection with what the woman was sharing.

Through this process I believe there was benefit in my having had experiences within all the roles – that of the woman negotiating their choice, those of a core midwife within a biomedical institution and those of an LMC midwife supporting an unconventional birth choice. While I was able to see and reflect upon shared experiences I didn't feel strongly positioned or aligned with any one of these positions over and above the others. My position of having 'insider' knowledge from my own experiences provides a connection to the world of the participants which supported "theoretical understanding and sensitivity" (Jootun et al., 2009, p. 45)

CONCLUSION

Throughout the decision making regarding the methodology of this research there was a congruence between the research aims and the methodology selected. Using social media for recruitment facilitated the inclusion of a range of participants from a range of geographic location. Online, semi structured interviews have supported the gathering of rich descriptive detail regarding the participant experiences. The transcribing and inductive analysis process

supported a depth of familiarity with the data that was beneficial for the process of thematic analysis. Reflexivity throughout has worked to minimise the opportunity for personal bias or belief to influence the research findings.

The thematic analysis outlined within this chapter led to the development of four themes which will be explored within the next chapter. In the findings chapter, the women who participated in this research are introduced and the themes identified are explored to provide insight into the experiences of the women as they negotiated and used water immersion within their labour.

CHAPTER FIVE - FINDINGS

The previous chapter outlined the methodological approach taken with this research to develop an understanding of the experiences of women with a clinically complex pregnancy who choose and use water immersion in labour and/or birth within a hospital setting in Aotearoa New Zealand. This chapter introduces the women who participated in this research and using the women's experiences and words will explore the four themes identified from within their interview data. From the interview data four themes were identified which were 'stopping the cascade' which describes how women use water to mitigate the risks that they perceive are associated with birthing in the hospital setting. A further theme was 'nice, private and hidden' which confirms that water immersion is effective pain relief and provides privacy and sanctuary in labour. The final two themes were 'standing my ground' which looks at the relationships which are integral in supporting women to exercise agency and 'needing sanctum' which relates to the ways the hospital environment can limit or support the woman's opportunity to create the birth experience they desire.

I have, in consultation and discussion with Kaitohutohu office as a part of the ethics approval process, taken the approach that it is not my position as a Pākehā researcher to offer my interpretations of the experiences of the Māori participants from a specifically cultural perspective.

Responses from recruitment

Following the recruitment process outlined in the previous chapter, a number of inquiries were made by potential participants. Twenty-eight potential participants made contact by commenting on the shared Facebook posts, and 14 potential participants made contact by email or Facebook messenger. One challenge of this process was that 26 of these 42 women who made contact had no identifiable risk factors in pregnancy and so did not meet the inclusion criteria. As discussed in Chapter 2 the perception of risk and complexity can differ between women and health professionals. This aspect of the recruitment process may indicate that women are recollecting their births as complex or high risk when there are no identifiable clinical risk factors in pregnancy or referrals through the childbearing process. A further nine

women made contact and received the information regarding the research but did not make contact to participate and did not respond to a further offer of an opportunity to ask questions about participating.

A total of seven women participated in this research. The women ranged in ages from 20 to 43 years old and were geographically spread throughout Aotearoa New Zealand. Four women identified their ethnicity as Māori and three identified as Pākehā. Three women lived in regional cities, two women lived in regional towns, one woman lived rurally, and one woman lived in an urban city. One woman was having her first baby and the remainder of women were having a subsequent baby. This ranged between their second baby and their sixth baby.

Introducing the women

These women could be also have been described as the participants in this research. I have chosen to introduce them as the women in this research to maintain their position as meaningfully present and active throughout the research findings and discussion.

Rererangi

Rererangi was discussing the birth of her sixth baby. She had birthed in a hospital setting with this baby due to a history of postpartum haemorrhage, after previously birthing her fifth baby using water immersion during a planned home birth. Rererangi had birthed in a hospital setting with her first baby. She used water immersion during this labour and birthed out of the water.

Renee

Renee was discussing the birth of her fourth baby. This birth was a Vaginal Birth After Caesarean (VBAC) following a caesarean section under general anaesthetic for placenta praevia with her third baby. Renee had birthed her first two babies vaginally in a hospital setting and had used water immersion during those labours. She laboured and birthed in the water with her fourth baby.

Kirsten

Kirsten was discussing the birth of her third baby, who was born in hospital following an induction of labour for oligohydramnios and decreased fetal movements at 41 weeks. Kirsten had previously had two home births and had been planning on using water immersion at home with this baby. She used water immersion during labour and birth with her care provided by the hospital core midwifery staff. Due to her rural location Kirsten's LMC midwife was unable to provide care for Kirsten in the hospital during her labour and birth.

Shani

Shani was discussing the birth of her first baby, and her self-identified pregnancy complexity was her Crohn's disease, which was well controlled throughout her pregnancy. Shani used water immersion for labour and the birth of her baby.

Jenna

Jenna was discussing the birth of her second child. Jenna had a history of obstetric cholestasis and a postpartum haemorrhage during her first birth and used water immersion for the labour and birth of this second baby.

Sophia

Sophia was discussing the birth of her second baby. Her complexity during this pregnancy was a Large for Gestational Age (LGA) baby identified on an antenatal scan. Sophia declined an obstetric referral or gestational diabetes screening following the scan. She had previously birthed in a hospital setting and used water immersion during this labour and birthed out of the water.

Georgina

Georgina was discussing the birth of her second baby. Her pregnancy complexity was a history of HELLP syndrome and also of traumatic brain injury with ongoing chronic fatigue. During an obstetric consultation Georgina had been recommended to have an epidural to manage the fatigue associated with labour and birth and had used an epidural in her first birth. During her second labour, she laboured and birthed in the water on her midwife's recommendation, due to a delay in the availability of an epidural.

The process of thematic analysis described in Chapter Three generated four themes. These themes represent the key aspects of the experiences as discussed by the women. These are

- **Stopping the cascade:** describes how women use water to mitigate the risks that they perceive are associated with birthing in the hospital setting (mitigating personal risk)
- **Nice, private and hidden:** confirms that water immersion is effective pain relief and provides privacy and sanctuary in labour
- **Standing my ground:** relationships including midwifery partnership and continuity of care are integral in supporting women to exercise agency
- **Needing sanctum:** the hospital environment can limit or support the woman's opportunity to create the birth experience they desire

Stopping the cascade

The first theme relates to the women's desire to resist or minimise the use of routine interventions within their birthing experience. This was driven by their previous experiences and their personal perception of risk during pregnancy.

Personal perspectives on 'risk' and birth

Women want to have care during their pregnancy and birth which integrates their personal perspective of their 'risk' status, philosophy of birth and previous experiences of midwifery care, pregnancy and birth. The women in this study understood the clinical complexity that impacted on their pregnancy and the potential associated complications or risks. Renee and

Rererangi had both considered birthing at home but had decided due to the potential risks associated with their complexity to birth within the hospital setting. Kirsten had originally planned to birth at home but had changed her birthing location to the hospital when complexity arose within her pregnancy.

The women in this research assessed the risk associated with their pregnancy complexity in the context of their previous experiences and personal approach to pregnancy. While the risks associated with their clinical complexity contributed to their overall understanding, the women's overall risk perception included a multiplicity of considerations. They often assessed the risk associated with that complexity differently than health professionals whose risk assessments are informed by the institutional guidelines and policies. For Sophia her first experience of birth had influenced the weight she placed on what she viewed as the conventional medical advice of policies and guidelines, saying "*it's a nice little guideline, but you can't take it as gospel".* Many participants did not personally view their pregnancy as particularly high risk, even though they were aware of the complexity and the possible complications that could arise from it. At times the women were more concerned with other physical effects of pregnancy rather than the medically identified complexity, such as Georgina having much more concern about the hip pain that she was experiencing that was affecting her daily life during late pregnancy, rather than her history of HELLP syndrome.

Adopting strategies to minimise medicalisation

Often, the women had a pre-existing understanding or concern relating to the potential for excessive intervention and emotionally unsatisfactory experiences within the hospital setting. Shani noted that the use of water was a plan to reduce the chances of the cascade of intervention becoming an aspect of her labour and birth

> *"If I'm in a bath, can't really have an epidural, well I can't have an epidural then I probably can't go down the line of forceps. I just didn't want anything to get away from me really in terms of intervention. I didn't want any, which I was lucky enough not to need any. I was like ok, if we start with water then it starts to make a lot of those early interventions more difficult to do".* (Shani)

The iatrogenic risks associated with the hospital environment and the related cascade of interventions were recognised by these women and formed a part of their overall view of risk, which included the risks related to an increased potential for medical interventions. The women's understanding of the potential for unwanted intervention often came from their own previous experiences of birth within a hospital setting. Many of the women had felt that the interventions used within their previous birthing experiences, such as IV lines, pharmacological analgesia and continuous fetal monitoring had been associated, for them, with the negative aspects of their previous experiences. This meant that for a number of them the goal with their current experience was to avoid what they viewed as unnecessary intervention to optimise the chances of a more positive birthing experience. Sophia chose water immersion to support her desire to birth physiologically and avoid an experience which could elicit a similar emotional response as with her previous birth.

> *"I was super focussed, like I want all the things that I wanted, no intervention, water birth, drug free if possible, natural, like no induction, like natural, natural processes the whole way. I was doing as much as I could to support my body doing things naturally"* (Sophia)

Sophia had experienced significant postpartum depression and "*a difficult period*" following her first birth, and she had identified that, for her, the emotional and psychological risks associated with potentially having a similar experience was something she was actively trying to avoid. She had proactively worked to create a different approach for birthing her baby this time, both in terms of her own headspace and her birthing environment.

> *"So that's why I was just super-duper determined do things differently this time… it definitely influenced a lot of the decisions I have made this time… I know most other mother's can do the C-section and have the bonding and all of that. I don't want to chance it. I don't want to chance that awful feeling of not being connected to my baby again"* (Sophia).

Rererangi had birthed her first baby in a hospital setting and recalls feeling separated from her support people by hospital equipment and the resulting dissatisfaction regarding that as a location for welcoming her baby into the world.

> *"Just injections, and stuff in my arms, and drips, you know. My husband stepping over a drip to try to... you know, it was very awkward. So I thought I'm going to try to get as far away from that experience as possible and have all my kids there so they can see…"* (Rererangi)

As a result of her first hospital birthing experience, Rererangi had decided to have homebirths for her subsequent babies, knowing that she wanted the birth of her children to be 'an experience' rather than a medical event. As she described it "*we wanted an experience, not just 'push a baby out', we wanted a journey. We felt like the water birth made sure that we got that*". Making the choice to return to hospital to birth this time, due to her complexity, meant that she was actively seeking ways to ensure that her experience this time was different to her previous experiences of hospital birthing:

> *"So the following birth, I knew that I wasn't going to get the one that I wanted [*meaning a water birth at home*], it wouldn't be exactly the way I want it. But it could be close enough. As close as we can, despite the nerves, that's what I wanted."* (Rererangi)

Water immersion was actively chosen as a way of mitigating some of these iatrogenic risks of birthing within a high technology environment. The women identified that negotiating to use water immersion was an active strategy of protecting themselves and reducing the possibility of a similar experience to their previous births. It was also evident for the participants who were having their first babies, that they valued and were aiming for a physiological birth and considered water immersion a clear strategy to support them with this goal. These women weren't opposed to intervention should it have been necessary in relation to their birthing experiences, but rather wanted to minimise the possibility of what they saw as unnecessary intervention.

Utilising midwifery support to negotiate care

Women valued midwifery care that was accepting of their personal perception of risk and included the ability to negotiate care which managed the risks which were important to the women. For Sophia this involved negotiating to birth in the primary birthing unit that sat

alongside a tertiary unit. She was advised that due to her pregnancy complexity and personal religious beliefs regarding blood transfusions it was against recommendations to birth in this primary setting. Sophia perceived her personal religious beliefs around blood transfusions to be an additional barrier to pursuing a water birth with minimal intervention.

> "*the barriers were predominantly my own stand for medical care probably is a bit of a hindrance to natural birth in general, because ... the staff seem to be very quick to want to jump in to prevent anything from happening that may cause bleeding. Or they jump in super quick because of that, some things that probably don't need intervention, that if we left would be ok. Like if it was another mum, they might just let things run a little bit longer and it would self-resolve".* (Sophia)

It was important for Sophia to avoid the negative connotations related to the delivery suite where she had birthed her first baby. She felt that her negotiations involved overcoming practitioner concerns about both her clinical complexity and religious beliefs. It was essential to these women that the midwives respected and understood their perception of risk and how it was informing their decision making in pregnancy. Renee noted that it was important that she found a midwife that "*supported her 150%*" and Kirsten had contacted her LMC midwife for further advice when receiving information from the hospital midwives and obstetricians recommending an induction of labour.

The women within this research were aware and well informed of the risks associated with their pregnancy or medical complexity, and with their midwives had negotiated a plan for managing those risks. As Rererangi said "*... I was concerned through the whole pregnancy. I was very concerned, um, we all were. But still the water birth was what I wanted*". Sophia discussed the desire to check out her own beliefs and choices with her LMC midwife to ensure that she was not doing something '*ill-advised'*. This demonstrates that women's personal perceptions of risk are informed by the advice of their trusted LMC midwife whom they felt understood and respected their individual situation and perspective.

Rather than a wholesale rejection of medical intervention, the care negotiated often included agreeing to aspects of the recommended care while negotiating a plan for the inclusion of

water immersion for their labour. Rererangi and Jenna had both consented to have an IV luer inserted at the beginning of their labours due to their histories of PPH and Rererangi had also consented to have bloods taken to enable to cross match to expedite a blood transfusion if needed. Rererangi had also planned with her midwife that she would stand in the pool immediately following birth to allow for an actively managed third stage of labour as had been recommended to her. Renee was aware of the risks associated with a VBAC and had carefully considered the risks of uterine rupture and the medical actions needed in that scenario including the possible timeframes for the essential care required in that situation. She had considered, discussed with her midwife and decided against the recommended actions of the insertion of an IV luer and continuous fetal monitoring on the basis of her personal assessment of the risks against the implications of these interventions for her comfort and mobility in labour.

Nice, private and hidden

This second theme relates to how the women in this research experienced water immersion as a strategy for managing labour.

Peace, protection and pain relief

The study participants were overwhelmingly positive about the experience of using water immersion for their labour. Most of them had planned that water immersion would be their primary strategy for managing the sensations of labour for a number of years, and generally the experience of using water immersion had measured up to their hopes. Shani and Renee noted that there were limitations of baths as a medium for water immersion which had a negative impact on their comfort and experience of water immersion.

The women spoke of their labouring experience feeling safe and private and that using water immersion allowed them to labour in the way that they felt they needed to. They reported

feeling a sense of control over their experience which was facilitated by the personal space that the pool provided them. The sense of privacy and safety had been a significantly positive aspect of this experience. They identified that this privacy has helped them maintain their sense of self and dignity throughout their birthing experience.

> *"In my mind it was nice and private, and hidden or something. Which was nice. I was sort of worried that labour would be about losing every piece of dignity you ever had. Which in hindsight, and even straight away I was very, very relieved to not feel that way during it. That was really nice actually. It was kind of private and safe..... not even just physical dignity but my emotional dignity definitely stayed intact. Yeah...which was a relief, I wasn't expecting that at all."* (Shani)

Water immersion supported a peaceful experience where women felt connected to their support people. While none of the women had their support people in the water with them, they noted that their birthing environment in the water, where they felt calm and in a position of control, fostered a connection with their support people.

> *"my husband was on the outside of the bath and we were quite close. We were face-to face kind of thing. I was resting on my elbows on the side of the bath, and it just...it just felt connected"* (Jenna)

The peace and privacy associated with water immersion supported participants to 'get in their zone' when in labour:

> *"My midwife sat in the corner and my husband was sitting near, sort of supporting me as well and they're just sort of watching you do your thing anyway. I was rocking side to side, I was on my knees, I was kind of rocking side to side like that, with my arms on side of the bath. I was just in my zone."* (Jenna)

The benefits of water immersion were broader than strictly the pain-relieving effects. The women suggested that being in the water contributed to a positive and peaceful birthing experience.

> *"Oh, it was amazing. It was amazing, it really was. I was really relaxed, yeah, it was really soothing and calming. I think the sound of the water just sitting in it. With my hands, just floating my fingers through the water. It was beautiful."* (Rererangi)

This was particularly significant for the women who described their previous experiences of contractions and birth in terms such as "*a murder scene" (Renee), "super-horrendous" (Sophia)* and "*like a shark, just jagged" (Sophia).* This was also true for Rererangi who recalled that her first experience of birth was "*22 hours, it was really painful, I didn't like it at all. Not soothing"* and that for her later births she had been looking for an experience that moved away from that recollection. Sophia had recollected her first birth, with induction, augmentation, epidural, episiotomy and forceps as a "*disembodied experience"*, where she was "*strapped onto the monitor, monitor on my puku*", "*like I was doing it but I wasn't"* and with *"legs up in the stirrups, Tom, Dick and Harry having a look".* She noted that for her subsequent birth having more control was really important to her so that she wouldn't feel like that again.

Water immersion was an effective strategy for managing the sensations of labour with women describing the pain relief as effective and significant.

> *"I felt like in between the most relaxed and calm and it took all the ...eased all that weight and pain in between contractions so I could really gain momentum for my next one and prepare myself."* (Renee)

> *"I just found it really soothing. Amazing for pain relief. And we were having a bit of a laugh about it like, you know, I'm in full labour and it wasn't painful. And I was thinking this is ridiculous"* (Rererangi)

Georgina hadn't been intending to use water immersion prior to labour. She had planned to use an epidural, as she had in her first labour and had been recommended by the obstetrician she saw during pregnancy. Due to the limitations in epidural availability at the time of her admission, her LMC midwife had made the recommendation of water immersion as a strategy for managing her labour. Georgina stated that she was now a strong advocate for water

immersion. She found the fatigue relating to labour and her traumatic brain injury (which she had been advised to have an epidural to manage) were even less with the water immersion than they had been in her previous labour with the epidural.

> *"It was amazing. I can't believe people don't use it all the time. Yeah, it just takes it away"* (Georgina)

Women would recommend water immersion to others following their experience of it. They spoke of the relief of the warm water in labour and the effect of easing the sensations of contractions.

> *"In terms of labour I loved, loved water and it's definitely what I say to anyone else now. If you're going to have a baby, just have a bath."* (Shani)

They also noted that their personal experience of labouring in water did not align with the perceptions of labour that had been commonly shared with them of labour as an overwhelming and painful process.

> *"getting into the bath and getting into the water...it's kind of calming. I say to people, I don't want to say that I enjoyed it...but it was definitely not not-enjoyable if you know what I mean. Yeah, sounds a bit crazy when you are talking about birth".* (Jenna)

Water immersion supported a positive experience of birth for the women. Renee remembers of her birth *"it was so raw and beautiful, and I was on a high from it…there is something so healing about childbirth".*

Feeling vulnerable outside the pool

By contrast the women have spoken of the feelings of vulnerability and exposure that labouring out of the pool had engendered. When Rererangi was considering her negotiated plan of standing in the pool for an actively managed third stage she had concerns about the feelings of exposure this may create.

> *"I was trying to picture in my head how's it going to look. How's it going to work? How will I hold the baby? I was worried about having no clothes on. Who's in the room? Who's going to see me?"* (Rererangi)

The women who moved from the pool during labour were challenged by the sensations of contractions once out of the water. Sophia was asked to move from the pool for a vaginal examination and "*I was, on my back and it was, it felt like the worst position in the world to be in. Trapped and so much worse".* She didn't return to the pool after the vaginal examination as she recalls that moving at that late stage of labour felt too challenging. Shani reported feeling the same when she was asked to move to the bed for a vaginal examination in late labour, that the effort to get off the bed felt unmanageable at that stage.

Kirsten recalls that before being 'allowed' to use the pool *"I was just worried about how quick it was all progressing and how painful it was from, from nothing you know. And I was like "oh god I've got to do something" and just sort of help keep it manageable...".* Once Kirsten got into the pool, she remembers that the water made her labour feel more manageable as did the feeling that she had some control over her situation.

Standing my ground

This third theme relates to the women's approach to their recent pregnancy, of being an active, involved participant and the importance of midwifery support in this process.

Driving their own experience

Several women identified that their role in their previous childbearing experiences had been as a passive recipient of recommendations and instructions from their health care providers. This had been driven by a naive trust that by accepting and following the recommendations of the

health professionals involved in their pregnancy and birth journey they would achieve positive outcomes for them and their baby, including a safe *and* satisfying birthing experience. In retrospect the women felt that it had either been a matter of luck that they had come through their birthing journey with both themselves and their babies being safe and well or that they had had an experience that did not meet their needs and which they recollected negatively.

> *"I was a little bit airy-fairy and ended up with a first birth that had lots of interventions and kind of went the exact opposite of what I wanted. The only way it would have been less what I wanted is if I ended up with a c-section, which is the only thing I didn't get"* (Sophia)

They had subsequently decided that this level of trust in 'the system' would not be their approach in their current pregnancy and birth. The women had come to their most recent pregnancies with the intention to be involved and active participants within their decision-making processes which they felt would optimise the chances of a more positive outcome. They also noted that their previous births had frequently involved a number of interventions and experiences which they were dissatisfied with, which they wanted to actively avoid this time.

Getting informed

The women saw their decision-making role as an active process which required a willingness to actively engage with literature, research, community groups and online support groups to support decision making that met their needs.

> *"I'd read some really good birthing books and things in the last few weeks and I felt like I just needed to back myself, and my ability, and get my head into it, and do everything possible."* (Renee)

Several participants had actively worked to foster their self-belief in their own body and their ability to birth their baby in relation to their previous experiences. With Sophia explaining she saw someone to support her with her mental and emotional approach to this pregnancy and birth.

> *"She helped me, helped me work through…a lot of my issues that came up from my miscarriage and first birth, there's a whole bunch of stuff, just stuff…we worked*

through that to get to a positive mind frame for this birth to be as natural as possible". (Sophia)

They identified that the process of becoming informed and building their self-belief helped to support their decision making and assure them that they were a part of a wider community of women making these choices, even if those women were not in the same physical community.

> *"I joined the Facebook VBAC support group. And I just wanted to clue myself up on how higher risk I was, and I knew I'd had two natural births and that possibly I could do it again. But I just wanted to know what the risks were. And my midwife was really great at explaining how lower risk it was to have a VBAC".* (Renee)

Several women identified that making a choice such as water immersion, which goes against hospital policies and protocols can be difficult, and have spoken of the need to be prepared, informed, supported and willing to fight for this choice. Shani noted that her first midwife *"seemed quite nervous saying that they might want to do a c-section and I was like, "I'm not having a C-section if I do not have to". Wasn't on my agenda".* Sophia had expressed that she felt that her clinical risks were the singular focus of the health system and that the recommended limitations around where she could birth and the facilities available were solely based on those clinical risk factors. She felt that within the health system there was no consideration given to her negative emotions of the birthing suite and her desire for a different birth experience in this pregnancy. Sophia identified that she felt that she addressed this by

> *"actually being focussed on a specific outcome and almost fighting for that. You almost have to fight for that in the public health system, especially if it's something that's not clinical".* (Sophia)

Renee noted that she needed to be able to speak up as a part of the negotiation and explain where she was coming from, in her understanding of her risks but also what she had decided around the plan for her birth.

> *" I explained that everything was tracking along beautifully, and I had all previous normal births, and that we didn't really need to be monitored but we were going to be in hospital."* (Renee)

These women were clear in their own understanding about their complexity, intervention and the use of water immersion. Most had gained this knowledge and formulated their decisions

through a process of discussion and information sharing with their LMC midwife as well as accessing other community support groups and a range of information sources. Jenna requested her hospital notes from her first birth, where she experienced cholestasis and postpartum haemorrhage, to ensure that she felt informed about what had happened which she felt helped her prepare for her next birth. Despite this clarity and understanding of their personal context the women identified that they needed the LMC midwifery support at times to advocate for their needs, particularly during labour when their choices were challenged by hospital staff.

Selecting a midwife ally

The women discussed that they wanted to negotiate individualised care for their pregnancy and birth experiences, but they expected, and encountered challenges to this negotiation. The choice of LMC midwife had the ability to act as either a facilitator or a barrier to their choice of using water immersion depending on the midwife's approach to individually negotiated care. Sophia, Rererangi and Renee had all made the choice to either change their LMC midwife during their pregnancy or chosen a different LMC than during their previous pregnancies because they were concerned that they would not be supported in their choices within the original LMC midwifery relationship.

The desire to be an involved decision maker in their most recent pregnancy had driven the women to seek a midwife who would support their decision making, advocate for their decisions when needed and could support them in having a more positive experience of pregnancy and birth. The women wanted to be valued as individuals who had unique and important needs which the midwife would respect and support.

> *"a lot of the actions and steps I took in my second birth were reflective of [my first birth]…I had a lot of time to think about what happened in my first birth, the things that I liked and disliked about it"* (Sophia)

Rererangi had made the choice not to return to the midwife she had used during her previous pregnancy and birth.

> *"I had a different midwife this time since the last pregnancy she [*Rererangi's previous midwife*] wasn't sure about a water birth for me, I think she just wanted to go a bit more traditional and things just in case it happened again"* and Rererangi wanted the opportunity to negotiate care that would take into account her history of postpartum haemorrhage and also meet her other priorities and needs in pregnancy and birth.

Renee and Shani both felt that the first LMC midwives that they had booked with were not supportive of their desires for a more physiological approach to their pregnancy and birth. They felt the midwives wanted to provide care governed by local policies and guidelines – 'the book'. This 'by the book' care was perceived by Renee to be related to the LMC midwife's workload.

> *"That's how I felt, she was disorganised and medical and was just like "you're going to do it by the books just cos that's what it says. And I've got a lot of people on my plate so that's just what I'm gonna do"* (Renee)

Within this study the women have identified the importance of having midwifery support in advocating for their individual priorities and needs when necessary. When talking about what she had learnt from her first pregnancy Sophia noted

> *"Unfortunately, there were quite a lot of things that I disliked in the end. I mean we still had a good outcome which is the main thing but I…I felt like I definitely chose a different midwife from the first time. I chose a lot of different things. I was a lot more vocal about what I wanted and I made sure that my midwife was onside with all that"*

Their LMC midwives had shared academic literature, consulted with other experienced midwifery practitioners and recommended community support groups for the women to support the process of the women becoming informed for their decision making about their care and options. Shani noted that she appreciated getting a range of information and that she was provided "*a whole lot of medical literature cos I care and I would rather keep up with things that are a little bit difficult to digest rather than like a laymen's terms of things personally."*

Sophia recalls

"she sent me some articles about that glucose testing because that was the first thing. I was like "Nah, don't want that" and she was like "Ok, well here's an article" and I read it and was like well that kind of backs me up actually".

Negotiating the midwifery partnership

The women valued their LMC midwife actively learning about and respecting their personal experiences and views of their pregnancy. It was important to the women that their LMC midwife took time to understand their personal perceptions and to support them in their decision-making process both as a source of information and an ally within their negotiations. This relationship supported the participants processes of negotiating care which met their needs during their most recent pregnancy and birth.

"I find midwives who are open to my ways of birthing. You know? I think a lot of New Zealand midwives are on that same page. But it is good to find one that is 150 percent behind you." (Renee)

The continuity of care within the LMC midwifery relationship also fostered the time and space for the development of a shared understanding between the woman and the midwife. Rererangi noted that it was an ongoing process of negotiation throughout the pregnancy which was driven by her desire for water birth.

"we weren't sure, but as the pregnancy went on, we talked about it a bit more" and then adding later in the interview that she was "*determined. When the midwife said it's possible you might not be able to do this, I was really disappointed and I thought I'm going to do this anyway, I was being quite stubborn. Because I want this water birth.... So I was just kind of determined to… to have it".*

Rererangi noted that developing a shared understanding of risk and her choices around water immersion took time to evolve during the journey of her pregnancy and she felt that this was a process of building trust and sharing how important water immersion was to her over that time. This was similar for Sophia who, throughout her pregnancy, had ongoing discussions with her midwife about where and how she wanted to birth, which at times involved her

midwife providing her with further resources or gaining advice from mentor midwives in relation to Sophia's preferences.

Support from whanau, friends and community was important for these women in their journey of negotiating care which met their needs as it differed from the hospital protocols. Support from these sources was seen by women as supporting this process, as the power differentials with health professionals can still make this negotiation a challenging process.

> *"it was important that I had a supportive husband as well. You know, birthing partner. Because he had to be part of that negotiation. Like the midwife and I could not have done that by ourselves."* (Rererangi)

This partnership between the participants and their midwife also included the 'checking out' of their beliefs with their midwife, which demonstrates the respect they hold for the midwifery expertise and input. The women often spoke of their desire to gather information to support their decision-making process, and this process was supported by the LMC midwives who the women had chosen. The women respected and valued their LMC midwives' expertise and experience to inform their own decision making.

> *"I double checked with her that my views and stand points matched hers, and she didn't have a problem with that, cos I didn't want to put her in a position of supporting something that she wasn't in favour of".* (Sophia)

Participants viewed LMC midwifery support as valuable throughout the process of decision making and experiencing the use of water immersion during a complex pregnancy. Midwifery care which has valued the woman's desire and where the woman has felt like the decisions are hers to make has been valued highly by the women.

> *"I think just in general that my views were very accepted and they weren't strange or an inconvenience or anything like that to anyone else".* (Shani)

The LMC midwife was a source of information and support of informing the participants of the physiological effects of water immersion and associated birthing positions and movements.

It was the LMC midwives quiet, non-interventionist support, and trust in the woman's body and decision making which supported the women to maintain their self-belief through the

birthing process. When Renee spoke about her LMC midwife's role in protecting her space she said "*she was fantastic. And she didn't even enter my space which I found really interesting. She said to me "I really picked up that you're a person who needs to go into your own space" And I do".* Renee also noted that the midwife understood that coming to birth in hospital from home was "*enough of an interruption*" and worked to provide a private and quiet space for Renee to labour.

Interestingly the study participants saw water immersion as something to be discussed and negotiated solely with midwives rather than obstetricians who were involved with their pregnancy. They considered water immersion the domain of midwives and none of the women could recall having a discussion during their obstetric consultations about the use of water. The participants expressed that it was exclusively the LMC midwife who fulfilled this support role and would frequently help them in navigating their time within the hospital system. When discussing the negotiation around the use of water immersion Shani noted that she

> *"spoke more to my midwife about that. I think with the obstetrician I think basically all I said was "Hey it's been great, but I hope I don't have to see you again" Like that was my vibe, if everything goes well in my eyes you do not have to enter this room, you will never, ever see me again kind of a thing……. he didn't even enter my mind to be honest as to having a discussion about how I wanted to birth other than "I don't want to have a caesarean, and I don't want to have anything else either. I want this natural."* (Shani)

Needing sanctum

This fourth theme relates to the environment within the hospital setting which impacts upon the birthing experience of women who choose water immersion in the context of complex pregnancy. This impact can be positive or challenging depending on the facilities available and the interactions with hospital staff.

Hospital has the technology if it's needed

The women within this research had chosen to birth within the hospital environment after consideration of the complexity within their pregnancy. This decision was based on their understanding that the hospital environment, with the facilities and staff available, was the most appropriate for them and was aligned with how they considered their own 'risk' status. Renee understood that her midwife was supportive of home birth and recalled from her decision making that *"because of the complications I know can happen in childbirth I just thought hospitals a good place to be, and I can still have my natural birth in hospital".*

The women had often considered or chosen more low-technology birthing settings in either previous pregnancies or in the earlier stages of their present pregnancy but had specifically chosen the hospital environment due to the clinical support for their complexity if required. Rererangi, Renee and Kirsten had all previously birthed either at home or in primary birthing environments and had moved to the current birthing setting due to their complexity in this pregnancy. By contrast Sophia had birthed in a high-tech birthing environment in her first pregnancy and negotiated to birth in the primary unit, which sat alongside a tertiary birthing unit, in this pregnancy so that she could access water immersion.

Pool shape and location

These women sought a safe and private space to birth within the hospital. They felt the pool fostered this feeling of protection from the hospital environment and supported the sense of connection with their support people and LMC midwife. This feeling of the woman's birth space being hers to do as she needed with, was frequently fostered by the LMC midwife and her approach to the birthing space and the woman's autonomy within this space. Renee recalls of her birth space "*I go for like a dark corner and so I was in the bathroom at (City name 2) hospital with my husband. He was there but he doesn't talk much either, and I just need my own space and I find the more people that come in, the more I get out".*

Within the birthing environment, the availability of the birthing pool, along with the pool structure and location impacted upon the woman's birthing experience. The ability to rely on access to water immersion as a strategy for labour and birth was important to participants. Those who birthed in a location where the availability of a birthing pool was assured found this reassuring. The awareness that pools were reliably available meant that they did not feel anxious about the possibility of not being able to access this option when in labour. Water immersion was such a valued aspect of the women's birthing plans that the uncertainty of availability was a potential source of anxiety. Because women are engaged and emotionally invested in their decision to use water immersion in labour, having often been a long-held desire, the potential of not having access to water immersion in labour was a negative, unsettling influence. It was noted in the interviews with Sophia, Renee and Georgina however that within the hospital birthing environments, birthing pools were not available within all birthing rooms and that this had the potential to cause challenges around the experience of managing the sensations of labour. Sophia noted that in the delivery suite where she was recommended to birth there were not pools available in every room and that the uncertainty of that would have changed her plan for labour, making it "*much more difficult*".

The location of the pool within the birthing space also had the ability to facilitate the feeling of safety and privacy which women associated with water immersion. Birthing pools in locations which fostered privacy and security for the women were valued as supporting a positive birthing experience.

The experience of using water immersion was seen as a time to connect with the chosen support people for labour and a time for the woman to retreat into her own space, physically, mentally and emotionally, for labour. The positioning of the birth pool within the birthing space had the ability to foster and support this important process in labour. This was also seen in Rererangi's concern of feeling exposed while exiting the birth pool that the security and privacy of the birth pool setting can support women in feeling less vulnerable within their birthing environment.

The women also found that the structure and shape of the pool or bath made a significant difference to their ability to fully benefit from the experience of water immersion in labour.

Participants found that high sided pools with a sturdy construction facilitated the adoption of upright birthing positions and supported them to labour in comfortable positions and move in labour as they needed to. Renee had used pools to birth in with the births of her older children, but the facility for this birth only had baths available for water immersion.

> *"They had birthing pools, they were deeper, deep enough to be able to bear over, but in (City 2) they just didn't have the pool……I lay on my back a lot and held onto the handles up behind it (demonstrates holding onto handles above and behind her head) but in the pool I felt like I could go over the side a bit.* (Renee)

By contrast baths which were provided in the birthing space for water immersion limited the benefits of water immersion. Baths did not facilitate the adoption of upright birthing positions, and Shani and Renee both commented that when trying to maintain an upright birthing position they had issues with comfort that distracted them from the benefits of using water. The facility where Shani laboured provided baths for water immersion.

> *"The immersion of it was amazing for like the first five minutes and then I got cold. I had to like, I remember trying to keep down under it but I wasn't comfortable trying to sit down… you could kneel in it which was really good and I'm quite short so I could fully extend my legs and turn around and things. But I did just find quite often that if I had my shoulders out. I just felt so, so cold, and I had to hunch back down into it. So that was probably my big thing."* (Shani)

Renee, who had previously laboured in birthing pools in her previous pregnancies, felt that that the provision of birthing pools which supported upright positioning and movement in labour would significantly improve the birthing experience. Renee relates her experience of pushing in a bath with this birth having previously birthed in birthing pools.

> *"Cos I felt like when I was pushing I was kind of on my back, with my knees underneath me, but I felt like my, like my body was floating up (demonstrates with arms rising repeatedly) ….yeah, that's probably my only concern with how small their pool is. It's just that if they could change their two birthing suites to have a decent pool it...it would be life changing for some people".* (Renee)

Needing an ally in the hospital setting

The women noted that in their experiences of birthing, the employed core midwives acted as a barrier in using water immersion in the context of their complexity. A number of the women were aware that the core midwifery staff were concerned about their decision to use water immersion as it sat outside the local hospital policy recommendations and actively attempted to enforce compliance with the policy recommendations at times. This caused the women some concern and anxiety during their labour and they often interpreted this as meaning that they were doing something wrong or being disapproved of by hospital staff. The women noted that within this environment their negotiated choices were open to spoken disapproval and the creation of barriers.

> *"So, my challenges would be the midwives within the hospital. They came at us, you know, with that we needed to be monitored, I needed to be monitored (indicating hand for an IV luer), Knocking on the door .....My midwife was just strong and said no, she doesn't want to be."* (Renee)

The partnership relationship with their LMC midwife was highly valued for the support it provided them in negotiating their choices within the hospital system. The women viewed their LMC midwives as being their ally, who was separate from the system and able to advocate for their needs as required within 'the system'.

When needed, the LMC midwives were explicit in their support. Renee related that her midwife, in the face of opposition from hospital staff for Renee's choice of water immersion, "*locked them out and we didn't see them again until 10 minutes before, you know the pushing phase".* Shani also recalled that she made a plan with her midwife to delay her admission to hospital in labour "*for as long as she could"* with the aim of supporting Shani in her desire for a physiological birth.

The importance of this LMC relationship, with the shared understanding of priorities and risk perception was particularly evident for Kirsten. Kirsten identified that the absence of her LMC

midwife to support her in negotiating to use the birth pool in labour was a significant challenge of her labour and birth experience. Kirsten's LMC midwife was unable to attend her induction and birth in the urban hospital due to the LMC midwife's rural locality and Kirsten noted that by herself she felt unable to discuss or negotiate the hospital policy around water immersion in the face of '*the rules'*.

Kirsten's experience was that the midwifery care from core midwives, who changed with each shift change during her time within the hospital, did not allow for the development of a shared understanding of Kirsten's priorities and needs.

> *"the first midwife* [core midwife] *because I said to her "oh can I have a water birth?" And she said no it was against their policy with induction, with risk factors, to have a water birth..... I don't know, I never saw any policy on water birth and induction, so I don't know"* (Kirsten)

Kirsten felt like the hospital policies were unable to be negotiated and that she felt powerless to make this choice in the face of this response. She then waited until a change of shift to request to use the pool, while not informing the second midwife that she had already asked the first, and the core midwife on the next shift supported her in using water immersion. Having to go about reaching her goal of water immersion in this manner left Kirsten feeling uncertain saying "*I don't know if I was even meant to be in the water*?" and "*I mean, of course at the birth there were other people there, and no one was like "get out of the pool", and I don't know, so it must have been all right*."

Without the presence of a known and trusted midwife within the birthing space Kirsten felt vulnerable to the opinions and responses of hospital staff who are involved in her experience.

> *I did not feel like I was able to negotiate any of the policy, no……Like this is what is happening (chopping motion with hand)*. (Kirsten)

Kirsten feels strongly that if her LMC midwife had been present she would have supported Kirsten in her decision to use water immersion for labour and birth and that this would have been a positive influence on her experience.

This chapter has summarised the themes identified from within the women's interview data. The first theme identified was stopping the cascade, which relates to how women use water to mitigate the risks that they perceive are associated with birthing in the hospital setting. The second theme, 'nice, private and hidden', described the women's experience of water immersion as effective pain relief and provides privacy and sanctuary in labour. The third theme, standing my ground**,** related to the relationships including midwifery partnership and continuity of care that were integral in supporting the women to exercise agency in their decision to use water immersion. The final theme, needing sanctum**,** discussed the ways the hospital environment can limit or support the woman's opportunity to create the birth experience they desire.

CHAPTER SIX - DISCUSSION

Revision of research aim and findings

Water immersion for women with complex pregnancy is valued for the women in this research for the way it optimises their chances of a satisfying, physiological birth and helps to manage the sensations of labour. This research aimed to develop an understanding of the influences, facilitators and barriers for women who chose to use water immersion for labour and birth when they were labelled/identified as being clinically complex, as well as to explore their experience of using water immersion in labour. The findings of this research were that these seven women used water immersion to optimise their opportunities for a satisfying and safe physiological birth and to attempt to reduce the iatrogenic risks of interventions of birthing within a hospital setting. This was often in response to previous dissatisfying experiences of medicalised birth. The women attributed using water as supportive of their positive experience of birth and in the water, women felt like they had privacy and control. Water was soothing and supportive during the sensations of labour and the women would recommend water for others to use for pain relief in labour.

A further finding was that seeking a supportive LMC midwife and the development of a relationship of partnership were key aspects in supporting women in making and negotiating this choice to use water in the context of a complex pregnancy. The relationship with the LMC midwife became a safe space, where women felt their personal beliefs were accepted and they could negotiate care which met their needs.

Within the hospital environment there were facilitators of water immersion, which were a pool location that engendered privacy and a pool shape that provided depth and was supportive of movement. Barriers within the hospital environment were interactions with core midwifery staff and the provision of baths for water immersion which were too shallow and did not support the women to labour in comfort.

Positive, peaceful and pain relieving.

The women in this research found that using water immersion in labour and for birth had a positive impact on their experience of birth. The findings of this research align with the existing literature regarding the effectiveness of water as a strategy for pain relief in labour (Carlsson & Ulfsdottir, 2020; Clews et al., 2019; Cooper & Warland, 2019; Fair et al., 2020; Feeley et al., 2021; Gayiti et al., 2015; Maude & Foureur, 2007; Richmond, 2003; Ulfsdottir et al. 2018). This research also supports the findings within the existing literature regarding the sanctuary and privacy which water immersion can provide for women during labour and birth (Clews et al., 2020; Cooper & Warland, 2019; Fair et al., 2020; Maude & Foureur, 2007, Richmond, 2003; Ulfsdottir et al., 2018, Ulfsdottir et al., 2019). The feelings of sanctuary, privacy and control which women associate with water immersion may be even more valuable for women who are experiencing a complex pregnancy and birthing within a hospital setting. As discussed previously in the background and literature review chapters, women experiencing a high risk pregnancy and/or birth identify increased levels of stress and anxiety and decreased levels of control within the childbearing experience.

High-risk or complex pregnancy is associated with women feeling that their pregnancy has been hijacked or waylaid by risk management and resultant feelings of being out of control (Currie & Barber, 2016). In research relating to birth trauma, women have identified that as their decision-making role and sense of power in labour reduced, their feelings of vulnerability and distress increased (Watson et al., 2020). Given the potential for negative emotions associated with complex pregnancy, the sense of increased control associated with water immersion may be significant for women experiencing a complex pregnancy and birth. Sanctuary and privacy are also particularly important when birthing within institutional setting because of the surveillance which is inherent within these institutions. In institutions where "high surveillance, risk aversion, 'poised-ness' for action and anticipation of abnormality" is the norm, it requires a proactive approach to create a safe and quiet space, for both the woman and the midwife, which is conducive to labour (Miller, 2020, p. 187).

Women use water to optimise the chances of a physiological birth and resist the medicalisation of birth

The women in this research had clear ideas about the type of birth experience they wanted, which was often informed by previous experiences, both positive and negative. Alongside the outcomes of physical safety for themselves and their baby, the woman desired a psychologically safe and satisfying experience of labour and birth. They had identified that through previous experience and their own beliefs about birth that the way in which their baby was born and the way they felt throughout the labour and birth was important to themselves and their wider whanau. Renee's description of birth as raw, beautiful and healing highlights that a positive and empowering experience of birthing positively influences the way a woman feels moving forwards from her birth. Sophia's desire and proactive decision-making to avoid a similar experience to her previous dissatisfying birth shows that women recognise that the way they feel about their birth experience impacts their future childbearing and parenting experiences. The process of birth is a "profound psychological experience that has a physical, psychological, social and existential impact in both the short and long term" (Olza et al., 2017) which the women in this study had identified and considered in their decision-making.

Internationally research of women's needs in labour and birth has demonstrated that "both safety and human flourishing matter to childbearing women and their families" (Downe, Byrom &Topalidou, 2019, p. 12). Physiological birth has both short- and long-term positive outcomes for the mother, infant and family group which relate to physical wellbeing, emotional health, infant growth, development and parenting (American College of NurseMidwives (ACNM), Midwives Alliance of North America (MANA), National Association of Certified Professional Midwives (NZCPM), 2012). Labour and birth involve a multitude of neurohormonal adaptions that support physiological labour and birth processes as well as the ongoing wellbeing of both mother and baby (Buckley & Moberg, 2019). The common psychological experience of a physiological labour is that it is a challenge the woman has managed with their own coping skills and support from others and that this results in feelings of strength to enter their parenting with (Olza et al, 2017). Current knowledge of biology and the hormonal interactions of labour reinforce that common interventions in labour

can interrupt these optimal neurohormonal adaptions and may disrupt these ongoing, sustained benefits (Buckley & Moberg, 2019).

Within this research that sense of sanctuary and protection provided by the water was particularly valued in relation to the potential for avoidance of a cascade of unwanted medical interventions which participants had either previously experienced in the hospital setting or were concerned about due to the birth setting. This aligns with the findings of Fair et al. (2020) who had noted that previous positive and negative experiences of birth had influenced women's decisions to use water immersion as a path to a less medicalised birth. Dissatisfaction with a previous birthing experiences was a powerful driver for the participants of this research to become knowledgeable and outspoken in making choices to optimise their opportunity for a physiological birth. It was evident from the women in this research, that their role in decision-making regarding the use of water immersion and having control within their birth space was a vital part of working towards a different experience of birth. A challenge identified by some of them was that in previous experiences of maternity care, trusting 'the system', and 'going with the flow' had resulted in births that many would consider physically safe, but the women themselves had identified did not feel psychologically safe or satisfying.

Birth trauma and birth experience

It is important when considering the use of physiologically supportive birth practices, including water immersion, that the woman's experience of birth, including being heard and feeling in control have an ongoing impact on women's psychological wellbeing. A sense of powerlessness and a lack of control within the childbearing experience can contribute to an experience of trauma (Watson et al., 2019). In recent years there has been increasing concern regarding the prevalence of birth trauma. As high as 45% for Australian women (Alcorn et al., 2010), it is commonly reported internationally as affecting between 20-40% of women following birth (Greenfield et al., 2019; Murphy & Strong, 2018; Watson et al., 2020). There is currently no research based in Aotearoa New Zealand to understand the prevalence locally.

Women who have previously experienced a traumatic birth can come to a subsequent pregnancy with a determination to have a different experience of birth (Greenfield et al., 2019). This includes becoming thoroughly informed about options for birth from a range of sources and making choices to ensure that they would have more control in their subsequent birth. Greenfield et al. (2019) reports that women came to a subsequent pregnancy with a driving desire to have a birth that was different to the previous traumatic experience, and this includes having a very clear desire to avoid specific aspects or interventions.

Feeling forced to comply with normative practices, struggling to assert choices and a perceived need to defend their body from medicalisation increases the chances of a negative psychological experience of birth, whereas individualised care is protective of a positive psychological experience of birth (Watson et al., 2020). There is the potential for all of these aspects to be present when a woman is attempting to negotiate her choices for water immersion in a hospital setting with a complex pregnancy. Internationally women have described attempting to negotiate unconventional birth choices as a re-traumatising experience, citing bullying, intimidation and a lack of willingness to compromise on recommended aspects of care by staff (Keedle et al., 2015). Within this research the women were able to negotiate the care that met their needs within the time and space of the continuity relationship with their carefully selected LMC midwife.

Humanisation of birth

The ‘humanisation of birth’ concept has developed from the “need to minimise the effects of the patriarchal and biomedical model of childbirth on women, which has been the predominant model in use since birth moved from home to hospital” (Curtin et al., 2020, p. 1745). Regardless of the risk status ascribed to women in pregnancy, women consistently seek maternity care which is respectful and helps to develop trust, confidence, control and provides privacy and the ability to make decisions (Curtin et al., 2020).

High risk pregnancy is associated with women having reduced control over their birthing experience, diminished role in decision making and an increased likelihood of a negative birthing experience (Behruzi et al., 2010; Curtin et al., 2020). It’s important to note that when

women talk about the desire for control during pregnancy this can mean remaining in a position of control to make decisions throughout their journey or feeling ‘known’ by their maternity caregivers and having trust that they will advocate for the woman’s needs so that the woman can let go and retreat inwards for labour (Olza et al., 2017). Barriers to the humanisation of birth in the context of high-risk pregnancy have been identified by both midwives and obstetricians as the prioritisation of solely the physical safety of the mother and the baby (Behruzi et al., 2010). The midwives interviewed by Behruzi et al. (2010) also identified that within biomedically dominant settings, midwifery care for high-risk women was closely surveilled and tightly managed by obstetricians leaving midwives little autonomy to support humanised birthing.

Traditionally the role of midwives has been viewed as the protectors of normal birth for women experiencing a healthy pregnancy. For women with clinical complexity, their care has been the domain of obstetrics, with midwives providing the midwifery care required. With increasing complexity within the birthing population there needs to be greater consideration of this traditional division of responsibility and care. The women in this research with complexity still desired to have a safe *and* satisfying physiological experience of birth and this is where these traditional responsibilities intersect.

Differing perspectives on risk

The current limitations which are placed on women experiencing a complex pregnancy prioritise managing the risks associated with the complexity over optimising the women’s possibilities of a physiological, satisfying birthing experience. It can be challenging for women within the hospital setting to advocate for themselves in their desire for a physiological birth. Without a clear institutional language and explicit commitment to physiological birth, this claiming of physiological birth occurs through the rejection of medical intervention and surveillance. This process then positions the woman, and her LMC midwife who is supporting her, in direct opposition to the dominant biomedical institutional culture.

Medicalised birthing environments are “powerful agents of social control, shaping individual values, beliefs and behaviours” for both the women who birth within the setting and the health

practitioners who work within that environment (Tracy & Page, 2019, p. 145). For women with complex pregnancies, where the "extremely rare risk of harm to a baby is valued over the much more common risks of morbidity (iatrogenic or otherwise) to the mother 'risk management' becomes a lever for strict behavioural restrictions on the women, both during pregnancy and labour" (Scammell et al. 2019, p. 104). This type of risk management as a form of social control places a moral imperative on the women to mediate her behaviours and choices to minimise potential risks, by accepting the normalised surveillance, monitoring and intervention of labour and birth (Dove & Muir-Cochrane, 2014; Scammell et al., 2019). The social construct of 'good motherhood' emphasises the importance of mothers being selfless and putting the needs of others before themselves (Cowie, 2015; Miller 2020).

The social construct of a 'good mother' aligns to the 'good patient' construct within the biomedical model which frames a good patient as one who will accept the advice of the experts even when this diminishes their own experience (Miller, 2020). These social controls and constructs make the path of negotiating birth choices that sit outside the guidelines a challenging undertaking.

While much of the literature exploring risk is based internationally where there is not an embedded continuity of care model, research in Aotearoa New Zealand supports that risk management and the dominance of the obstetric discourse remain a challenge within this setting (Clemons et al., 2020; Miller, 2020; Skinner & Foureur, 2010; Skinner, 2011). The women who participated in this research were cognisant of the disapproval and concern of their choice for water immersion, particularly from hospital staff, which sat outside these dominant obstetric interventions for risk management.

What is the aim – normality or physiology in labour and birth?

The women in this research negotiated to use water immersion in the aim of optimising their opportunity for a physiological or normal birth. Within their pregnancy journey, claiming this space occurred with conversation of "wanting things natural" and by the rejection of routine medical interventions. This is an almost philosophical challenge, in that there is no universal agreement of what a 'normal birth' is and for most descriptions that exist within the literature,

the presence of any pregnancy complexity does not fit within that description. “Normality within labour and birth is a poorly understood concept which has no language of its own” (Scammell & Alaszewski, 2012, p. 216). Young (2009) compared normal birth statements and found significant variation in the definitions of what a normal birth entailed, although there was general consensus that the starting point of a normal birth was to be low risk at the start of labour. The New Zealand College of Midwives has a consensus statement on normal birth, which reiterates the midwifery role in supporting normal birth and benefits of normal birth but offers no definition of what comprises normal birth (NZCOM, 2009). Normality as a concept “has to be defined against the dominant discourse of high risk which invokes the language of pathology and medical intervention” (Scammell & Alaszewski, 2012, p. 216). For women who enter their labour and birth with pregnancy complexity, how is the aim of their labour and birth then defined given that they are already excluded from the most common understandings of normality? There is also an invisibility of the concept, and prioritisation, of physiological birth for women with complexity within birthing institutions.

The window of normality in pregnancy and birth is narrowing, being defined by the absence of complexity, in a context where increased screening and testing is proscribing risk to increasing proportions of the birthing population (Scammell & Alaszewski, 2012). This reduces the midwifery role then to one of surveillance for deviations from normal parameters and risk management, with a much less defined and therefore prioritised role of supporting normality or optimising physiology (Scammell & Alaszewski, 2012). Recent research in the Netherlands, a maternity system where women with identified complexity are transferred to the care of a clinical midwife and obstetrician, has identified that 71% of all birthing women gave birth under the care of a clinical midwife and obstetrician as they had been identified as being at increased risk of complications (van Stenus et al., 2018). New Zealand research in 2011 identified that the obstetric consultation rate was 35%, although it would be an interesting area for further research to see if that has increased in the decade since (Skinner, 2011).

This is where the divergence between normal birth and physiological birth becomes vital to define. As discussed, normal birth is poorly defined and generally viewed as being reliant on the starting point of an uncomplicated pregnancy leading to a labour and birth which progresses normally without the need for intervention. By contrast physiological birth has

been defined as being “powered by the innate human capacity of the woman and fetus” with the additional statement that “supporting the normal physiologic processes of labour and birth, even in the presence of [such] complications, has the potential to enhance best outcomes for the mother and fetus” (ACNM, MANA & NACPM, 2012). Supporting physiological birth should be the aim for all health professionals with deviation away from this only as frequently and as far as necessary. As a part of this commitment to protecting physiology because of the benefits physically, hormonally and psychologically, exclusion of midwifery care practices which support physiology should only be considered after a nuanced consideration of the specific risks associated with a woman’s specific complexity. There are challenges to this within institutional birth settings.

Hospital policies and practice guidelines have been established to prioritise physical safety and outcomes but there is little evidence of the inclusion of psychological safety within these policies and guidelines. (Healy et al., 2016). “Risk is perceived in terms of physical harm to the mother or baby, discounting psychological harm” (Healy et al., 2016, p. 112). This was noted by Sophia within this research as requiring a willingness to fight for anything that wasn’t a clinical outcome. The biomedical model and the focus on risk management are the lens through which birth is viewed with no visible and explicit commitment to physiological birth within most of these institutional birth settings. Within Aotearoa New Zealand there is a physiologic birth policy at one District Health Board which reiterates the importance of physiologic labour and birth but does restrict the policy as being applicable to women whose pregnancies are considered low risk from both a maternal and fetal perspective (ADHB, 2020).

As it currently stands supportive practices such as water immersion are considered and assessed differently through the ‘institutional lens’ than medical interventions such as epidural (Newnham et al., 2015). Behind these differences is the unpalatable idea that the safety of the fetus and newborn is prioritised above the birth experience of the woman with any iatrogenic morbidity associated with increased intervention viewed as an acceptable risk to take with the woman’s satisfaction and psychological response to birth. This issue is at the crux of the humanisation of birth movement which argues that the safety of the baby and the experience of the woman cannot be viewed as an either/or scenario. It is imperative that health

professionals are expected to consider and value *both* of these aspects. Without the language to support normality or optimise physiology within the context of pregnancy complexity, are women and their midwives speaking an undervalued language when talking about their desire to reduce intervention and experience a physiological, satisfying birthing experience.

Institutional views of risk and water birth

The experiences of the women within this research were that, while their LMC midwife was supportive of their choice to use water immersion, there was discomfort, concern and at times open disapproval from the core midwifery staff. These experiences align with the experiences of community midwives when providing care which sits outside the guidelines where they identified that "conflict was inevitable if they deviated from protocol" even if it aligned with the woman's informed decision making (Healey et al., 2016, p. 112).

Interventions such as water immersion, which support women in having a physiological birth and are associated with more positive birthing experiences, are positioned within the biomedical setting as being unsafe for women with complexity. Currently there is no evidence or research to support the biomedical stance of a lack of safety for women with complexity using water immersion and this would be a more honest and accurate place to initiate the conversation regarding water immersion in labour in this context. Women and health professionals recognise that the eligibility requirements for water immersion are subjective rather than evidence-based and the commonly raised concerns against water immersion are not supported by the research (Milosevic et al., 2020). What research has demonstrated is that water immersion has been shown to have no negative impacts for women or babies and is associated with a range of positive outcomes such as feeling more in control, being more active and experiencing less pain in labour.

Within biomedically dominant institutions it can be challenging to change the rhetoric around water immersion and the positioning of water birth as an unsafe practice. For all health practitioners the literature consistently demonstrates that a lack of familiarity and confidence with water immersion is associated with increased fear, increased beliefs around the risks of water immersion and a reduced willingness to support water immersion (Plint & Davis, 2016; Milosevic et al., 2020; Stark & Miller, 2010). Pools for water immersion are less available

within obstetric birth settings which maintains this lack of familiarity and confidence for staff and the literature supports that hospital staff, both midwives and obstetricians, operate as gate keepers to pool use (Milosevic et al., 2020; Russell, 2011). While some birthing suite midwives have indicated that they believe water immersion has an important role within obstetric birth settings this belief was not held by obstetricians who did not want to and were not confident in providing care for women using water immersion (Orrantia & Petrick, 2021; Plint & Davis, 2016).

Midwives have identified that in high-tech birthing environments the discomfort of many practitioners with pool use meant that adverse outcomes were quickly attributed to being due to water immersion (Milosevic et al., 2020). This increased the sense of blame for individual midwives if they had supported the women in her desire for water immersion. Within the obstetric birth environment, the socialisation of midwives and ward culture had a significant impact on midwifery decision making (Russell, 2011). Midwives working within an obstetric setting were less likely to feel they were able to make an autonomous decision to support water immersion than midwives who were working in a midwifery-led setting (Milosevic, 2020). Additionally, water immersion within an obstetric setting was often viewed as time consuming, requiring an investment in one-on-one care which was viewed as a 'luxury' and 'selfish' of the midwife (Russell, 2011). This characterisation of supporting water immersion as selfish, is in opposition to what is viewed as the positive and desirable features of a core midwife which was to be busy, task focussed, efficient and loyal to the team and needs of the institution (Russell, 2011). The role of the LMC midwife in Aotearoa New Zealand may mean that this perception does not have a significant an impact for most women, although for Kirsten who had care from the core midwifery staff during her labour this could have been an influence. This characterization contributes to the ethical challenge which midwives face when the needs of the institution, and to be a member of a cohesive collegial group are in opposition to the philosophical commitment to woman centred care (Newnham & Kirkham, 2019).

It is difficult professionally and personally for midwives to provide care which sits counter to the culture of an institution, even if that midwifery care has clear rationale and is underpinned by evidence (Keating et al., 2012; Newnham & Kirkham, 2019). This conflict between the disparate demands of providing woman-centred midwifery care and being a cohesive team

member can lead to midwives feeling frustrated and alienated from their colleagues (Hunter, 2004). The provision of care which sits counter to institutional culture may be even more challenging for LMC midwives and core midwives to support in the context of water immersion in complex pregnancy where there is no research to support or refute safety. In the situation where there is no research to inform practice it is more likely to become a situation which relies on dogma, philosophical positioning and opinion.

How core midwives are influenced by institutional views of birth

All midwives in Aotearoa New Zealand are autonomous practitioners but it appears that this autonomy is more challenging to exercise within an obstetrically dominant, technocratic institutional setting (Clemons et al., 2020). The clinical skills and attitudes required to protect and promote physiological birth and those required to manage the high technology care which some women require are different skill sets (Milosevic et al., 2020). New Zealand research has identified that core midwives have multiple skills at caring for women with complex health needs, managing emergencies, building relationships and being flexible and adaptable in working with a diverse range of demands (Gilkison et al., 2017).

The women in this research were aware of the discomfort of core midwifery staff with their choice for water immersion and the core staffs' desire for women to comply with the protocols. They experienced core midwives as policing and attempting to enforce compliance with the institutional policies regarding water immersion. It is important to explore the context of core midwifery work within obstetrically dominant institutions to understand what may be influencing these interactions.

The focus on risk management within institutions has impacted on the working culture of employed midwives(Clemons et al., 2020; Milosevic et al., 2020; Scamell & Alaszewski, 2012). Employed midwives in Aotearoa New Zealand have identified that they feel a sense of professional safety by staying within the policies and protocols of the institution, even if they are aware that these policies are not evidence based (Surtees, 2010). There is the understanding that the midwife will not be challenged at an individual level for their

midwifery practice so long as their practice remains within these guidelines, whereas to step outside of the guidelines leaves them open to challenge, without the support of the institution, if there is an adverse outcome (Surtees, 2010). Negative responses and interactions from colleagues can mean that supporting choices which sit outside institutional policies can be more difficult for employed midwives, who have the one work setting, than self-employed LMC midwives, who work within multiple settings (Clemons et al., 2020).

While policies and guidelines to support normal birth have been introduced in an attempt to increase institutional support for normal birth, there remains challenges. In Australia when normal birth guidelines have been introduced, midwives, particularly within obstetric units, have identified that concerns about insufficient collegial and management support and fear of being blamed for an adverse outcome have been barriers to implementing the guideline into their practice (Toohill et al., 2017). Midwives perceived that there was poor organisational support for a normal birth guideline in more biomedically dominant maternity facilities. Healy et al. (2016) found that evidence based normal birth guidelines may offer a tool for midwives to resist medicalisation of labour and birth for low-risk women. For the women in this research who entered labour with complexity this does little to support them in their desire for physiological birth.

Within obstetric units the focus on technology and surveillance is evident within the resourcing priorities, investing in more surveillance technologies rather than equipment to support physiological birth practices such as birthing pools or equipment to support birthing in alternate positions (Darling et al., 2021, Miller, 2020). The impact of these resourcing priorities is evident in the provision of baths for labour and birth which negatively impacted the experiences of women in this study. The lack of pool availability within these settings also means that women who are birthing within this setting are aware that they cannot rely on the availability of a pool in labour, which can be a source of anxiety and can mean women are less likely to request water immersion (Milosevic et al., 2020).

Midwives working within biomedically dominant birth settings can also be vulnerable to the accusation of unsafe practice when working to prioritise supporting normality alongside the surveillance and risk management processes which have come to define midwifery care in

labour for women with complex pregnancy. International research has found that midwives need to actively work to protect women from the blanket application of policies regarding care during a 'high-risk' labour and birth to try and support the normality that women desire (Dove & Muir-Cochrane, 2014). This then introduces the risk of censure to the midwife and the accusation of poor practice by not following the prescribed surveillance and monitoring recommendations (Dove & Muir-Cochrane, 2014).

International research has identified that employed midwives are challenged in supporting unconventional choices when their professional role is aligned with the priorities of the institution (Aanensen et al., 2018). The impacts and consequences on the midwives themselves of supporting these choices, which sit outside the institutional recommendations means that this may not feel like a realistic option for many midwives (Aanensen et al., 2018). The structural circumstances of employment within high tech birthing institutions, including the risk management approach of the institution, diminishes and constrains the midwife's ability to support water immersion using their own clinical judgement without having to defend and justify their practice to colleagues and managers (Aanensen et al., 2018; Milosevic et al., 2020). Welsh research identified that within the biomedically dominant hospital setting the focus is physical safety by prioritising "standardisation of care, risk reduction, efficiency and effectiveness" (Hunter, 2004, p266). This results in a reduced focus upon the needs of an individual and a greater focus on the needs of the institution which results in a dissonance between this and the women-centred principles and frameworks of midwifery (Hunter, 2004).

This is a difficult position for midwives to navigate as they recognise that at times the intervention in birth is focussed more on defensive practice for the midwife though the interventions themselves may not be evidence based and may not be within the best interests of the woman and baby (Surtees, 2010). This sits in direct opposition to the Competencies for Entry to the Register of Midwives in Aotearoa New Zealand which identifies that midwives will utilise "midwifery skills that facilitate the physiological processes of childbirth and balances these with the judicious use of intervention when appropriate" (Midwifery Council, 2007, p. 3).

LMC midwives hold a key role in supporting women

The structure of the LMC midwifery system in Aotearoa New Zealand is vital for supporting women to make choices which sit outside of the dominant medicalised paradigm. The participants within this research valued their ability to seek and choose a midwife who would support their choice to use water immersion and be their advocate throughout their birthing experience. The women recognised this importance of having an ally in their negotiations to such a degree that they were willing to change midwives during their pregnancy or seek a different midwife from their previous pregnancies to ensure that they found a midwife to support their informed choices. The women had identified that this was not the case with all midwives and that a number of midwives had offered "*by the book*" care. The terminology of "by the book" care within the context of these women's experiences raises some challenges for midwives to consider. Within this context the women perceived "by the book" care as being directive, solely based upon local policies and unable to be negotiated. This begs the question about whose "book" we are reading and basing practice on?

Midwifery as a profession in Aotearoa New Zealand has a range of frameworks, including Tūranga Kaupapa, practice standards, statement of philosophy and ethical responsibilities, which should be considered "the book" by which the midwifery practice is measured (Guilliland & Pairman, 2010; NZCOM, 2015). At the crux of all of these midwifery frameworks, including the New Zealand College of Midwives Code of Ethics and Midwifery Philosophy is the position of the woman as an active partner within the midwifery relationship with the right to control and make decisions regarding her pregnancy and birthing experience (NZCOM, 2015). This approach of woman-centred care is provided on the premise that women themselves are best placed to understand their individual context, their personal experiences and health priorities. For women whose choices sit outside of the medical recommendations relating to their context this autonomy can, at times, be considered more rhetorical than practical (Newnham & Kirkham, 2019).

Within institutional contexts women and midwives are caught in a position where there is pressure to comply with "normative institutional practices" which prioritise policies, practices

and interventions based on the presumption of "medical safety" that comes with surveillance and intervention (Newnham & Kirkham, 2019, p. 2). This rhetorical autonomy and the "normative institutional practices" do not align with the frameworks of midwifery practice which is relational based upon premises of informed consent and partnership (Newnham & Kirkham, 2019, p. 2). There is also the responsibility to balance providing appropriate midwifery care, ensuring the care provided does not place the woman or baby at risk and the responsibility not to interfere in the normal processes of pregnancy and birth (NZCOM, 2015). For midwives within biomedical institutions "the dissonance between the ideal of woman-centred care and the reality of institutional birth, have externalized responsibility to the extent" that midwives conform and enforce medicalised practices based on perceived expectations that at times sit beyond the policies and guidelines (Newnham et al., 2017, p. 6). Women are unlikely to request options that have not been made available to them by health professionals, which situates a significant amount of power within the hands of health professionals (Newnham & Kirkham, 2019). This means that when midwives are presenting women with care recommendations which are directive and based solely upon the policies of local birthing institutions, they can be limiting the women's options and diminishing their ability to exercise their right to be an active decision maker within their birthing experiences.

Internationally, it is viewed that when midwifery continuity of care is embedded at a policy level it supports a decrease in intervention and an increase in normal birth rates by providing holistic, individualised midwifery care (Tracy & Page, 2020). The experiences of the women in this research, requiring a considered selection of LMC midwife to ensure support of their decision making suggests that supporting physiological birth for midwives in current institutional contexts remains challenging. Continuity of care by an individual midwife, even where this model of care in the norm, does not in and of itself insulate the midwife, and then by effect the woman, from the biomedical risk management focus of birthing institutions. It cannot be a realistic expectation that without explicit and continuing commitment to supporting physiological birth within birthing institutions, that continuity of care by an individual midwife (or small group of midwives) is enough to resist this pressure and reverse the declining rates of 'normal birth'.

A directive, policy driven approach to midwifery care also works to diminish the midwife's autonomy as a practitioner as it doesn't account for the biomedical and technocratic dominance within birthing institutions. This dominance can result in policies which are heavily skewed towards perceptions of medical safety that align with empirical evidence, the use of technology and surveillance (Newnham & Kirkham, 2019). These policies also frequently undervalue the benefits of practices which support physiological birth. There is benefit in seeking to have empirical evidence to inform guidelines within healthcare. It is important to also recognise, within this pursuit, that there are other research designs which offer complimentary and valuable perspectives in ensuring care which is both safe *and* satisfying (McCourt, 2005).

Midwives working with women with complexity

It is important to consider the contextual factors which can influence midwives to start to practice in this policy driven way. The women in this research had interpreted that this "*by the book*" care was related to the busyness of the midwife in her practice and the perception that negotiated, individualised care was a more time-consuming undertaking. Midwives have identified that when working with women who make unconventional birth choices, the acceptance of the woman's autonomy can be challenging when the midwife senses a conflict between maternal and fetal wellbeing (Feeley et al., 2019). This concern aligns with what midwives in the United Kingdom have identified feeling frustrated with women making unconventional birth choices that are "silly, challenging and tricky" as well as time consuming (Feeley et al., 2019).

There are also a range of wider macro factors which influence midwives' individual practice and the ways that they are able to practice their autonomy. Research based within Aotearoa New Zealand has identified that LMC midwives continue to work with women with complex pregnancies and at times protect the women from the anxiety associated with risk by mediating the risk and taking it on themselves as practitioners (Skinner, 2011). The women in this research felt that the LMC midwives were positioned outside of 'the system' and able to be 'on the woman's side'. This ability to be 'on the woman's side' has been viewed as

fundamentally important for midwives providing continuity of care with unconventional birth choices internationally (Feeley et al., 2019). While the LMC model within Aotearoa New Zealand can support women with choices which sit outside the dominant paradigm there remain tensions and responsibilities for midwives which may remain challenging (Clemons et al., 2020; Skinner, 2011).

Continuity of care within the LMC model supports the midwife in advocating for the women, as over the time of the relationship she develops a clear understanding of the woman and her expectations (Clemons et al., 2020). The LMC model with self-employed midwives who are not bound (legally, philosophically or emotionally) to the policies and protocols of institutions provides more opportunities for women to find a midwife whose beliefs align with theirs and will support their choices and priorities throughout their individual childbearing journey. Providing midwifery care which sits outside of institutional policies but supports the informed choices of the woman can still be professionally difficult for the LMC midwife (Clemons et al., 2020; Miller 2020).

Support, trust and respect are key within collegial and interprofessional relationships for midwives to support normal birth, resist the culture of fear and practice in their full midwifery autonomy (Clemons et al, 2020; Aanensen et al., 2018). While the issues of institutional culture impact on the LMC midwives within their practice, the ability of the midwife to move in and out of the institutional environment and provide midwifery care in a range of settings may be protective of her ability to fully practice her midwifery autonomy (Clemons et al., 2020). Even with this ability to transition into and out of the institution, it has been identified that this position of woman centred care and supporting women in their decision making, can leave the LMC midwife open to criticism by practitioners who do not understand the context and nature of this relationship (Clemons et al., 2020). Navigating the ‘grey area’ between hospital protocols and guidelines, their clinical judgement and accountability within the midwifery profession can be a difficult path for LMC midwives to navigate (Clemons et al., 2020). LMC midwives have reported feeling discredited and judged for the care provided to women while supporting women’s informed decision making (Clemons et al., 2020). LMC midwives’ have also reported that when they work to support women’s informed decision making and they are not supported by colleagues this can cause the “burden of outrage”,

which alongside the other pressures of this LMC midwifery role can reduce sustainability (Cox & Smythe, 2011, p. 21). Within this research the women appreciated and valued the role of the midwife in creating and maintaining a safe harbour for the woman to labour and birth. It is apparent within the literature that the role of creating this space comes with tensions, stressors and potential consequences for the midwife, which may be why the women in this research identified that not all LMC midwives were willing to facilitate this choice.

What is needed moving forwards

What is required is a more carefully nuanced conversation about risk in pregnancy in relation to the woman's specific pregnancy complexity, the interventions which are introduced in an attempt to manage that complexity, and the practices that support physiological birth that are excluded because of the complexity. The risks of the original complexity sit alongside the reduction in the likelihood of a physiological birth for women with complexity, particularly when the interventions introduced increase the factors which have been demonstrated to diminish the probability of a normal birth. This in itself is a *further* risk to the woman and baby but is not generally discussed because it is an iatrogenic risk associated with the recommended care practices.

Rather than blanket recommendation against water immersion defined by a "high risk" or "complex" pregnancy, a more nuanced and individualised decision-making process which considers the woman's holistic context and her individual complexity, overall health, desires for labour and birth need to be considered within the decision-making process. This process aligns with the existing frameworks for midwifery practice currently within Aotearoa New Zealand, but the lived experiences of the participants of this research shows that women need to actively seek this opportunity and by default this is not how decision making around water immersion is being experienced within the real world.

Limitations of the Study

Recruitment for this research utilised social media to reach participants and invite them to participate in the research. This worked well and I received a number of contacts regarding the research. Given that women who took part in this research volunteered to speak to me in response to these posts indicates that they felt some motivation to share their experiences. This

has the potential to have introduced some bias as far as whether the women who were motivated to share their experiences have similar experiences to those women who choose not to make contact and participate in research. This self-selection bias may mean that there are perspectives which have not been uncovered by this research or that the women who chose not to take part had a different experience of this phenomenon.

Also limiting this research to women who had used water immersion in their labour means that it is only the perspectives of women who successfully negotiated this choice whose voices are included within this research. There may be valuable perspectives of women who were not able to negotiate this to be a part of their labour strategy or who chose not to birth in a hospital setting because of that negotiation process.

This research is unique in that it included any identified complexity that was categorised within the Section 88 Referral Guidelines. The heterogeneity of the research participants' complexity may mean that their experiences may differ based upon their individual complexity of pregnancy. Specific challenges related to specific complexity may not have been identified as it would have been if there was homogeneity of pregnancy complexity.

Study strengths

Strengths of the study are the richness of the data shared by the women. One to one interviews with the women supported a warm rapport and open communication where women felt safe to share details of their personal motivations, insights and experiences. This is a strength of this approach, which may have been diluted with a different approach to data collection. One of the benefits of online data collection was that the woman is in her own home and in a position of power to continue or terminate the interview as suited her. The women in this research shared detailed and insightful descriptions of their experiences which provided rich data for this research. This may have been influenced by this power dynamic of being 'together but apart', and that it didn't rely on meeting in a 'neutral location' or the woman inviting me into her space,

Undertaking the interviews, transcription and analysis myself, supported by my supervisor, facilitated me to be fully immersed and get a depth of familiarity with the women's

experiences. While this was a significant commitment of time and energy it did allow me to become intimately familiar with the words, phrases and responses of the women as they discussed their experiences. This also supported consistency within the thematic analysis across all interview transcripts in comparison to when this process is undertaken by a number of different researchers.

Areas for further research

This research sits within a gap in the literature exploring the experiences of women and midwives when women make unconventional birth choices. There are numerous areas for future research to further develop the understanding of this space.
A prospective cohort study exploring the maternal and neonatal outcomes for women with risk factors who use water immersion would start to provide evidence to consider in the discussions about the safety of water immersion in the context of pregnancy complexity. This is an area where there is a dearth of evidence to inform practice.

This research has provided insight into the women's experiences within Aotearoa New Zealand and it is apparent that the influence of midwifery care through that negotiation was significant. A qualitative descriptive study exploring the experiences and influences on midwives when women choose to use water immersion in a complex pregnancy and birth would be insightful to add to this understanding. This research could focus on solely water immersion during labour and birth, where there is minimal literature informing practice, or could be broader in looking at unconventional birth choices to add to the small amount of international research which has explored that topic.

An ethnographic study of the culture of birthing institutions and the way in which physiological birth or birth satisfaction is considered for women with complex pregnancy would be valuable future research. It is apparent from the literature that the culture of institutions significantly influences that practice of midwives and women. Research to explore how the culture of this setting influences the approach to physiological birth would add to our understanding of pregnancy complexity in Aotearoa New Zealand.

Ethnographic research exploring the ways that water birth policies within Aotearoa New Zealand are informed and applied would also provide valuable insight for understanding this area. This research could also explore the ways that practitioner belief systems influence their understanding and acceptance of water immersion.

Implications for practice

This research provides some insights to be considered for practice. It is apparent that the women in this study were aiming for a safe and satisfying physiological birth while birthing in the recommended biomedical setting because of their personal perspective of the risk of their complexity. At the intersection of obstetric and midwifery care, which is where women with complexity are placed, there needs to be careful consideration and commitment to how obstetricians, midwives and the institutions can support safe *and* satisfying birthing experiences. The invisibility of physiological birth for women with complexity within the guidelines, protocols and policies needs to be considered and rectified. Normal birth guidelines have had some mixed success internationally at supporting midwives in the provision of physiologically supportive care for women with low-risk pregnancies and this is an area to consider in the context of complexity.

Resourcing of physiologically supportive practices need to be valued and this includes the provision of birthing pools which are fit for purpose rather than baths which are not. This needs to be considered in the same way that investments in other technologies are considered, otherwise it is essentially paying lip service to supporting water birth while providing facilities that do not support privacy, immersion, buoyancy and movement which are the key benefits of water immersion in labour.

Consideration needs to be given to how best support LMC midwives when they are supporting women with unconventional birth choices. The institutional culture impacts upon LMC midwives and this may be limiting the willingness of LMC midwives to support women in these informed choices.

Recognition also needs to happen of the unique challenges of rural women when complexity in their pregnancy and/or birth necessitates a change in birthing location away from their LMC midwife. For these women it can mean that they are needing to negotiate new relationships at a time of uncertainty and these new relationships have the ability to support or limit the woman in her ability to be an informed decision maker within her childbearing experience.

Conclusion

The women in this research were determined to include water immersion as a part of their strategy for managing labour. Water supported their positive birthing experience and when the women used water it provided a safe, peaceful place to labour which provided effective pain relief and a sense of control over their experience. To achieve this, they needed to carefully select their LMC midwife, and this included a willingness to walk away from midwives who were not willing to offer negotiated, individualised midwifery care. The women spoke of requiring a determination and willingness to fight for the opportunity to use water immersion within 'the system'. The women experienced 'the system' as having a singular focus on clinical outcomes with no consideration of the women's desire to have a safe *and* satisfying birth experience.

The partnership relationship with the LMC midwife was valued by the women. The ability of the LMC midwife to understand and respect the woman's previous experiences and personalised perspective of risk was important. Discussing water immersion was viewed by the women as the domain of midwifery, with none of the women discussing this option with obstetricians. The policing and enforcement of biomedically dominant birthing policies appears to be a role which has fallen to the midwifery profession. This may be evidence of the biomedical dominance affecting midwifery practice to such a degree that policy adherence is subsuming both the woman's rights to make informed decisions and midwives' ability to support informed decision making outside of the guidelines.

The frameworks for midwifery practice are in place to ensure the woman's centrality as a primary decision maker within her birthing experience. While the midwifery frameworks are

clear about this role, there is the potential for this to end up being ‘rhetorical autonomy’ if the woman’s choices are situated outside of the biomedically dominated guidelines. To achieve a role as an informed decision maker with unconventional birth choices the woman needs to be strong, determined and willing to forge her own path.

The dominance of the biomedical model remains powerful within birthing institutions impacting on the behaviours of most practitioners within this space. LMC midwives have a significant role in advocating for women and creating safe spaces within these birthing institutions for women to birth. This advocacy role may come with significant personal and professional consequences as a single practitioner positioning themselves against the dominant culture of the birthing institution.

The paradox is that women with complexity are advised to birth within the hospital environment to maintain safety for themselves and their baby. Once there the policies, guidelines and risk-averse lens of the institution restrict the very practices which support physiological and satisfying birthing experiences. This places women and midwives in a challenging position. Internationally, this leads some women to make a choice to birth outside of the hospital system to protect themselves from the surveillance and potential interference of the biomedically dominant institution. Women in Aotearoa New Zealand can make the choice to birth within the institution as recommended, but this does open the woman, and her LMC- if she has found one to support her informed choice - to the surveillance, disapproval and potential interference that this environment promotes which can detrimentally affect the positive, empowering and transformative experience of birth women seek.

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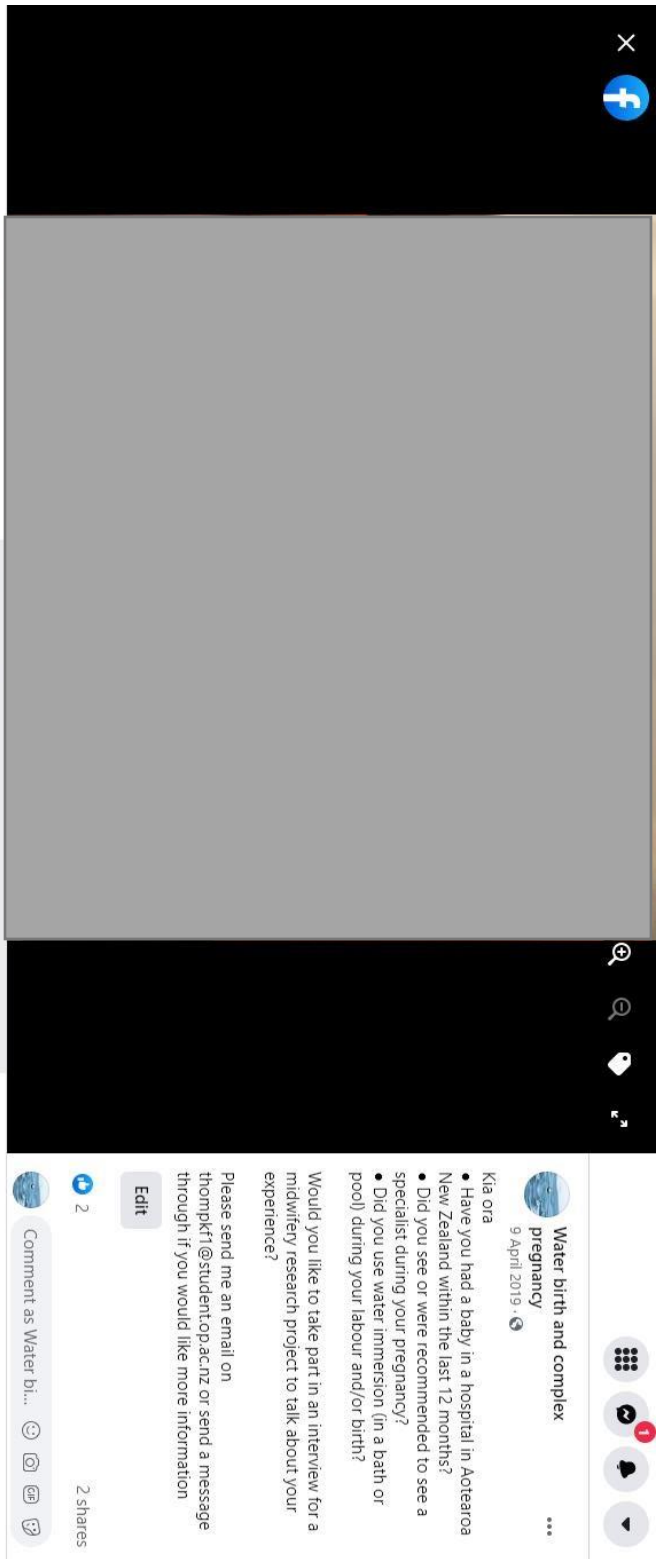
Appendices

Appendix A: Initial Facebook Recruitment Post



Appendix B: Participant Information Sheet

Participant Information Sheet

Title: Water immersion with clinically complex labour and birth

Kia ora

My name is Kelly Kara and I am a midwife conducting a supervised research project at Otago Polytechnic as part of my Master of Midwifery degree. Thank you for your interest in my project. Please read this information sheet to help you decide if you would like to participate in my study. I would welcome you making contact if you have any further questions or would be interested in participating in this research.

General Introduction

Many women use water immersion (soaking in a bath or pool) during labour and /or birth to manage the feelings of labour. While a little is known from New Zealand and other countries about why women make this choice and how it feels to use water, very little is known in New Zealand about the experience of women who have had a risk factor in their pregnancy (needed to see a specialist in their pregnancy).

This study would involve sharing your story of how you came to choose water immersion and what it felt like in labour and/or during birth with a research midwife.

What is the aim of the project?

The aim of this research is to explore women's experiences and decision making in regards to using water immersion when they have a clinically complex pregnancy. For this research a clinically complex pregnancy means that you saw, or were recommended to see a specialist

(for example an obstetrician, anaesthetist, cardiologist, diabetes specialist) during your pregnancy.

Interviewing women who have used water immersion in labour will give insight into what may have influenced, challenged or supported your choice for water immersion. Understanding your views could support midwives, obstetricians and others within the maternity system to support women and facilitate their choices in different ways in the future.

What types of participants are being sought?

Women who have

- had a baby in Aotearoa New Zealand within the last 12 months
- saw or were recommended to see a specialist during their pregnancy
- used water immersion (in a bath or pool) during their labour and/or or birth in a hospital setting

What will my participation involve?

An interview, which can be either face to face, in a place that you are comfortable, or using an online app such as Facetime or Zoom. The interview is expected to last 30-60 minutes depending on how much of your story and experiences you would like to share. If you would like to, you are welcome to have whānau or support people with you during the interview. If you would prefer to share your story with a Māori research assistant, this can be supported within this research.

During your interview you will be asked to share how you came to choose to use water in your labour and what it felt like to use the water during labour and/or birth.

The interviews will be recorded, and you can ask for the recording and interview to be paused or stopped at any time without having to give a reason. You do not have to answer all the questions during the interview if you do not feel comfortable to do so.

After the interview is completed, the researcher will transcribe the interview. A written copy of this transcript will be sent to you to check its accuracy and ensure that you are happy to share the information it contains.

If you choose to participate, but later decide to withdraw from the project, this can be done at any stage until data analysis has commenced without needing to give a reason for your withdrawal. Data analysis will commence four weeks following your interview.

How will confidentiality and/or anonymity be protected?

Your confidentiality will be protected by ensuring that all identifiable details are removed from the interview transcript (such as names and places). If you would like to, you can choose a pseudonym to be used within the research for your information, or if you would prefer your first name can be used within the research. Your contact details and consent form will be stored separately from the interview transcript and will be stored in a password protected computer system.

What data or information will be collected and how will it be used?

Your interview will be recorded, and then what you have said will be transcribed by the researcher. Once your interview has been transcribed and checked for accuracy the recording will be deleted. The transcript will then be retained by the researcher in secure storage for a period of seven years, after which it will be destroyed (unless agreed otherwise on the consent form).

Findings of this research may be published in academic journals and/or presented at conferences but you will not be able to be identified in any data included in a publication or presentation.

This study is one aspect of a larger project examining the experiences of midwives and women in relation to use of water for labour and/or birth. As such, the findings of this study may be reported alongside those of the other studies associated with this project.

Any additional information given or conditions agreed to will be noted on the consent form.

What is the next step?

If you have any questions about what you have read or would like to know more before you decide whether to take part, please contact either myself or my supervisor.
If you would like to participate in the study, please make contact with me using the contact details below to carry on to the next step. If you have indicated that you are interested in taking part I will phone you so we can discuss the project further and you can ask any questions that you may have about the research, and then if you would like to take part we will arrange a suitable time for the interview. If you agree to take part, you will have another opportunity to ask questions prior to signing a consent form before the interview begins. If the interview was online then the consent form would be reviewed again and then you would sign the consent form and email a copy of this back to me.

If you have any questions about the project, either now or in the future, please feel free to contact either myself: Kelly Kara, email thompkf1@student.op.ac.nz or phone/text

or my Research Supervisor: Suzanne Miller, Suzanne.miller@op.ac.nz or phone

Even if you decide not to participate, I thank you for your interest and the time you have spent considering this information.

Ngā mihi mahana,
Kelly Kara

Appendix C: Participant Consent Form

Participant Consent Form

Water immersion with clinically complex labour and birth

I have read the information sheet concerning this project and understand what the research is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:

- ☐ My participation in the project is entirely voluntary and I am free to decline to answer any particular question
- ☐ I am free to stop participating at any time
- ☐ I am aware I can withdraw any information I have supplied up until data analysis has commenced without giving reasons and without any disadvantage. Data analysis will commence after __/__/____ (complete date four weeks after interview date)
- ☐ My data will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained by the researcher in secure storage for seven years after which it will be destroyed. If it is to be kept longer than seven years, my permission will be sought.
- ☐ The results of the project may be published and/or used at a presentation in an academic conference but my confidentiality will be preserved either by use of a pseudonym or by using my first name only within the research
- ☐ I understand that the findings of this study may be published or presented alongside the findings of the Water Birth Aotearoa research and related projects and I give my

- ☐

permission for my comments to be used in such publications or presentations I would like to receive a summary of the research findings

Additional information given or conditions agreed to

_____

_____

_____

I agree to take part in this project under the conditions set out in the Information Sheet.

…… (signature of participant)

…… (full name of participant – please PRINT)

…… (signature of researcher)

…… (full name of researcher – please PRINT)

…… (date)

This project has been reviewed and approved by OPREC (# 001) and endorsed by the Kaitohutohu Office.

Appendix D: Ethics Approval

Category B Ethics Approval Letter

Date: 8th April 2019

Address

Dear Kelly

Re: Application for Ethics Consent

Reference Number: #001

Title of Application: Water immersion with clinically complex labour

Thank you for your application for ethics approval for this project

The review panel has considered your revised application including response to questions and issues raised. We are pleased to inform you that we are satisfied with the revisions made and confirm ethical approval for the project.

Many thanks for your careful responses to our recommendations.

We wish you well with your work and remind you that at the conclusion of your research you should send a brief report with findings and /or conclusions to the Midwifery Research and Ethics Committee.

All correspondence regarding this application should include the reference number assigned.

Best wishes with your research

Chair Ethics Committee

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Appendix E: Kaitohutohu Consultation

Whāia te pae tawhiti kia tata whāia to pae kiā maua

Pursue the distant horizons so that they may become your reality

Office of the Kaitohutohu Research Consultation Feedback
Date: January 9 2019
Researcher name: Kelly Kara
Department: Capable NZ, Master of Professional Practice
Project title: A qualitative research project to explore the experiences of women with a high risk pregnancy who choose to use water immersion during labour.

INDIGENOUS INNOVATION: Contributing to Māori Economic Growth	
TAIAO: Achieving Environmental Sustainability through Iwi & Hapū Relationships with the Whenua & Moana	
MĀTAURAKA MĀORI: Exploring Indigenous Knowledge	
HAUORA / ORANGA: Improving Health & Social Wellbeing	This research will use social media to recruit women who have chosen water immersion birthing option during a high risk pregnancy. The resear her is hoping to attract Māori womens voices and experiences, therefore it will be important that the social media avenues are appealing to Māori women. It would be prudent to consider support services for women if the water birthing experience was traumatic for them. The applicant has noted the importance of following the cultural suggestions within Te Ara Tika Guidelines. Previous email communication with the researcher has highlighted the higher chances of Māori women experiencing inequitable health care and the historical effects of intergenerational colonisation. The researcher is more than welcome to come back to the Office of the Kaitohutohu if her first round of recruitment is unsuccessful in with your research. recruiting Māori women. Please find attached a research article that may be useful (Maud and Foureur, 2007). We wish you all the best
TO LIVE AS MĀORI: Kaitiaki to Ensure Māori Culture and Language Flourish	

UNLOCKING THE INNOVATION POTENTIAL OF MĀORI KNOWLEDGE, RESOURCES & PEOPLE
Name: Kelli Te Maihāroa
Position: Tumuaki: Rakahau Māori | Director of Māori Research, Otago Polytechnic