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The joy of childbirth:
A mixed method exploration of positive birth experiences

A thesis
submitted in partial fulfilment
of the requirements for the degree
of
Master of Applied Psychology

at
The University of Waikato

by
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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

2019

Abstract

The birth of a child is a significant event in a mother's life and marks the start of many psychological, emotional and physical transitions. While negative birth experiences have been linked to poor psychological outcomes for mothers, positive birth experiences have been linked to increased self-esteem and confidence in parenting. Few studies have been conducted that explore the birth experience for New Zealand women, and this is particularly important due to the unique culture and maternity care system.

The aim of the current study was to identify factors associated with positive childbirth experiences for New Zealand women using a mixed methods approach. Recruitment for the current study was completed in the context of a pilot study for a mobile phone app for pregnant women. Survey data for 54 women were collected at four time points and included measures of emotional distress and, after delivery, subjective birth experiences and obstetric outcomes. Six women were interviewed and asked to share their birth narrative based on a positive appraisal of their birth experience.

The results of this study identified perceived control, midwifery support and the birthing environment as important factors associated with the birth experience. There was a weak non-significant correlation between pain and birth experience, supported by birth narratives that identified positive reframing of pain and a combination of the three factors above as mitigating factors. Emotional distress during pregnancy was not consistently associated with birth experience. Obstetric factors associated with birth experience included type of delivery, location of birth and presence of labour complications.

This research highlights the importance of the maternity system and context of care for New Zealand women giving birth, a relevant finding given that during the time of the study, the midwifery profession was in the process of advocating to improve their working conditions and level of remuneration. Changes in maternity care and the midwifery profession, or lack of change, may have a considerable effect on the birth experience of New Zealand women.

Acknowledgements

There are many people I'd like to thank that supported me while I completed this thesis. It's been a wonderful journey, and I am grateful to still be passionate about my topic as it comes to an end.

To my participants, thank you for giving me the opportunity to listen to your birth stories. You truly made this research come to life and made me keep going during the more challenging parts.

To my supervisors, Dr Carrie Cornsweet Barber and Dr Bridgette Masters-Awatere. Carrie, I cannot thank you enough for your generosity with your time and knowledge, and your encouragement of my abilities. You gave me the confidence to push myself out of my academic comfort zone. Bridgette, thank you for reminding me to keep the heart in the research.

I would like to express my gratitude to the University of Waikato and the Waikato Graduate Women's Trust for the scholarships that supported me during this project.

To my friends, thanks for keeping my cup full and lifting my spirits. For play dates, tea and great chats about childbirth. To my university friends, I have appreciated the self-reflection, the feedback and the lengthy discussions about the process of research. Thanks for making this project feel less lonely. Also, a special thanks to Cait for proofreading this thesis.

To my family, I couldn't have finished this without your love and support. Thank you all for the babysitting, cleaning, folding, dinners and so much more. I couldn't have chosen a better village to be surrounded by.

Finally, to Rene and Arie. Rene, there was never any doubt in your mind that I could do this project and as always, you were right. Arie, bringing you into the world was one of the most empowering moments of my life. Thank you for being with me all of the way. I love you both very much, and thanks for making my dreams come true.

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Chapter One: Introduction

The birth of a baby is a powerful life event, signalling a number of significant psychological transitions for women (Aune et al., 2015; Hauck, Fenwick, Downie, & Butt, 2007). Childbirth is an experience that links physical, psychological, social, cultural and spiritual components (Chalmers, 2013). The experience of giving birth is complex and unpredictable, and although the physical and biological aspects of childbirth have been well researched and understood, it is an area that has been understudied within the contemporary psychology research literature (Saxbe, 2017).

The birth experience could be described as a gateway to motherhood, and therefore may have a considerable impact on how a woman adjusts to life with a new baby. Negative childbirth experiences have traditionally received much attention both within society and in the literature because the consequences of a negative birth experience can be devastating for women and their families. The prevalence of a negative birth experience is estimated to be approximately 9% internationally (Smarandache, Kim, Bohr, & Tamim, 2016) and are associated with an increased fear of childbirth (Elvander, Cnattingius, & Kjerulff, 2013), difficulties with infant attachment and breastfeeding (Brown & Jordan, 2013), the development of post-traumatic stress disorder (PTSD) (Beck, 2004; Goutaudier, Séjourné, Rousset, Lami, & Chabrol, 2012), impacts on future reproductive behaviour (Gottvall & Waldenström, 2002) and increased risk of developing psychological difficulties after birth (Bell & Andersson, 2016). One of the most significant psychological difficulties that can develop after birth is postnatal depression, which can have lasting impacts on a woman's wellbeing, functioning and relationships, and has become a major public health concern in recent years.

Postnatal depression in New Zealand is estimated to affect between 8-13% of birthing women (Health Promotion Agency, 2015). In 2015, 58,957 women gave birth in New Zealand (Ministry of Health, 2016), which means that approximately 4,126 women had a negative birth experience and approximately 8,843 women may have experienced postnatal depression, indicating that the problem is not insignificant.

Previous studies on psychological correlates of the childbirth experience have found that positive birth experiences can enhance psychological wellbeing (Michels, Kruske, & Thompson, 2013), parenting confidence for new mothers and mother's ability to bond with baby (Weisman et al., 2010). It has also been found that a woman's perception of her care during childbirth has long-term psychological effects that are associated with the health and wellbeing of both mother and baby (Hunker, Patrick, Albrecht, & Wisner, 2009). These findings suggest that a positive birth experience may act as a protective factor to prevent psychological distress after birth, although there is a lack of reliable evidence to confirm this. What can be agreed on is the need to reduce the number of women that endure negative childbirth experiences, as the consequences of those experiences can be detrimental to women and their families. Therefore, it is important to gain a deeper understanding of positive childbirth experiences for New Zealand women and what factors are associated with positive birth experiences in order to be able to adequately support them during pregnancy, labour and after birth.

Definitions relevant to the childbirth experience

It can be difficult to define the concept of a positive childbirth experience, as birth is multifaceted and can encompass a range of both positive and negative events and emotions. A previous review by Stevens, Wallston, and Hamilton (2012) relating to childbirth experiences highlighted the fact that the term *childbirth satisfaction* had been used interchangeably in the literature with *positive childbirth experience*, but it quite often describes different types of assessments of the experience. Some researchers conceptualise satisfaction as an emotion or affective response while others regard satisfaction as a cognitive evaluation of whether the birth experience conformed to a woman's own standards (Stevens, 2011). Traditionally, health care professionals focus on obstetric outcomes as the main measure of quality of care, which can be gathered from the common view of that 'what really matters from childbirth is that mother and baby are healthy, and that satisfaction with the birth experience of secondary importance' (Hodnett, 2002). In recent times, women's levels of satisfaction with their experiences have become more of an important indicator in terms of assessing the quality of care they receive. However, the quality of care that a woman receives during labour is only one aspect of the birth experience. Satisfaction also brings together a number of important factors, which are discussed later in this review. When evaluating the current literature on childbirth experience, there was no widely-used definition of the term *positive childbirth experience*. Therefore, for the purpose of this study, when there is reference to *positive childbirth experiences*, it means a positive self-reported subjective appraisal of a woman's overall physical, cognitive, emotional and spiritual experience of birth.

The childbirth experience is complex, which is why methodological problems have been associated with describing and understanding birth experience, as expressed by Waldenstrom (1999). As indicated in the following literature review, a range of different methodologies have been used to understand the birth experience. While some studies have looked at individual variables and the birth experience, most factors relating to the birth experience, such as pain and labour duration, cannot be manipulated in an experimental research design.

Literature Review

In this review, general literature about the childbirth experience will be discussed, and the factors that have been associated with positive childbirth experiences will be explored and presented. Within the childbirth experience literature, there are three factors that have most consistently been found to be important in the birth experience. These factors are perceived control, pain management, and professional support (Ayers & Pickering, 2005; Bryanton, Gagnon, Johnston, & Hatem, 2008; Hallam, Howard, Locke, & Thomas, 2016; Hildingsson, Johansson, Karlström, & Fenwick, 2013; Waldenström, Hildingsson, Rubertsson, & Rådestad, 2004).

Positive childbirth experiences

One of the most influential studies of the overall experience of labour and birth was completed by Waldenstrom in 1999. The study looked at the labour and birth experiences of 1,111 Swedish women, with the aim of increasing understanding of the birth experience by studying the association between selected variables and women's assessment of their overall birth experience. Low medical risk pregnant women took part in the study and were given questionnaires to complete in early

pregnancy and 2 months postpartum. The birth experience was assessed on a 7-point scale that ranged from *very positive* to *very negative*. Results of the study showed that half of the 1,111 women had a *very positive* birth experience (a score of 7). Overall, 71% of women had a positive experience (scores 6 and 7) and 29% had a less than positive experience (scores 1-5). There were no statistical differences in age, education and ethnic background between the positive and the less positive groups. However, the small number of women that had a *very negative* birth experience (n=36) were more likely to be younger, less well educated or born in another country. Five factors were found to be associated with how a woman perceived their birth experience: involvement in labour and social support were factors associated with positive birth, while anxiety, pain and being a first-time mother were associated with a negative experience. A pertinent finding of this study was that locus of control and anxiety as personality characteristics are less important predictors of childbirth satisfaction than perceived anxiety and control during childbirth (Waldenstrom, 1999).

Factors associated with a positive birth experience were explored in depth with a population of Swedish women by Hildingsson et al. (2013). The longitudinal cohort study of 763 women looked at the prevalence of a very positive birth experience and factors associated with the experience, as well as perception of the birth experience at two points in time, 2 months after birth and 1 year after birth. The women's perception of birth was assessed on a 5-point Likert scale ranging from *very positive* to *very negative*. The majority (70%) of mothers who participated in the study were aged between 25 to 35 and 44% were expecting their first child. The results indicated that 65% of women had a positive childbirth experience (score of 4 or 5), with a third of women stating that their

birth was a *very positive* one (score of 5). A finding of interest from this study showed that women's assessment of their birthing experiences changed over time, with 22% of women's assessment becoming more positive and 15% more negative. The most important factors associated with a very positive birth were women feeling in control, using no pain medication or using cognitive methods to manage pain during labour, and achieving a spontaneous vaginal birth.

Meanwhile, a Swedish study that explored the written narratives of 14 women's birth stories concluded that the birthing mother's ability to trust in their own body, the interaction between their mind and body and the consistency of support from their midwife were the strongest factors that first-time mothers felt had positively affected their birth experiences (Nilsson, Thorsell, Hertfelt Wahn, & Ekstrom, 2013). The participants were all first-time mothers, a relevant factor as first childbirth experience has been associated with a negative experience in other research (Zasloff, Schytt, & Waldenström, 2007). The concept of *body strength* describes the process where women began to trust in their body, allowing their own body to take command of the situation, in particular when it came to facing contractions. This surrender of control to their physiological instincts gave them a sense of power over their birthing situation. The concept of *manage pain* described how the body's strength was affected by how they could manage the pain. Some women experienced a feeling of defeat if they had not planned to use epidural analgesia during birth, but did so because of severe pain. The interaction between the body and the mind in giving birth was important, particularly for the ability to take control during childbirth, as the loss of control was described by some as being worse than the pain. Finally, the level of support given while in labour was important. Women in this study reported that individualised support

during labour was an important factor in their birth experience, as they wanted to be seen as unique individuals by the professionals at their first birth (Nilsson et al., 2013). Additionally, this research found that women who had long labours could have a positive experience if they had supportive professionals and partners present, which differs from research that describes longer labours being associated with a negative birth experience (Waldenström et al., 2004).

The importance of internal factors and the environment during labour and childbirth were explored in a study with 12 Norwegian women by Aune et al. (2015). Women who had a positive birth experience and a ‘normal birth’, defined as a spontaneous vaginal birth with no complications, were able to participate. Qualitative methodology was used in the study, in the form of in-depth interviews five to six weeks after the women had given birth. The study findings included two main themes, *safe environment* and *emotional strength*. A safe and stable environment was vital for promoting a positive birth experience, and this was not only stated in terms of the physical birthing environment, but also related to the state of the women’s own personal life (Aune et al., 2015). A stable environment in this context meant stability in their own lives, like having employment, a place to live and a stable relationship. This stability was of importance because it enabled women to have control, peace of mind and close relationships with people in their own networks, and these ideas were found to transfer well to the birthing environment. Emotional strength was another finding from this research, where having a positive attitude towards childbirth and learned coping strategies were both described as being important contributions for women’s positive experiences. Women described an attitude that birth was a natural process. The women also had faith in their own strength, trusted their body and did not fear

giving birth, even making conscious decisions not to be intimidated by the birth experiences of other women. In terms of learned coping strategies, all of the women in the study had experienced challenges in their lives and they had used these experiences to find ways of coping, which they then applied to the birth. Birth was viewed as a challenge that was able to be managed by using the coping strategies that they had learned in other life situations. This research gave great context to the birthing experience, but was limited by the selection criteria enabling a woman to take part in the research, as the perspective of women who may have experienced an instrumental or caesarean birth were not considered.

Perceived control in labour

In the context of childbirth, control is a very important factor that has had a profound effect on how women go through birth (Green & Baston, 2003). In this context, it is often referred to as 'perceived control'. The definition of perceived control for birthing women is the ability to have influence over decisions and what happens during labour and birth (Green & Baston, 2003). Within the childbirth literature, perceived control is one of the strongest factors that influence the way a woman feels about her experiences of labour and birth (Ayers & Pickering, 2005; Green & Baston, 2003; Jafari, Mohebbi, & Mazloomzadeh, 2017; Namey & Lyerly, 2010). Although most studies discuss the presence and importance of perceived control within the birthing experience, there is a variance in how control is defined across each of the studies and what it means to each woman. There is no agreed definition for the term control, and 'being in control' is a subjective state; it is important to clarify and explore what each woman means when they talk about control due to its subjective nature. Perceived control was found to be an important factor in the birth experience across a range of studies;

high levels of perceived control were associated with positive birth experiences (Ayers & Pickering, 2005; Green & Baston, 2003; Hildingsson et al., 2013).

Although perceived control is a concept that has been well researched, little has been written to explain how perceived control has an influence during labour (Berentson - Shaw, Scott, & Jose, 2009). Perceived control in childbirth is different from other forms of control that feature in health literature. Perceived control has also been related to the concept of locus of control, which is an individual's belief system regarding the causes of their experiences and the factors to which that person attributes success or failure, and is categorised into internal and external types (Rotter, 1966). The concept of perceived control, which concerns the level of control a person has over decisions relative to their situation, differs slightly to the concept of self-efficacy, which is an individual's personal judgement of how well one can execute course of action required to deal with prospective situations (Bandura, 1982). Although the relevance of these concepts is apparent in the childbirth literature, they do not consider the specific psychological and physiological context of childbirth.

There have been attempts to examine the relationships between control and the childbirth experience. Green and Baston (2003) conducted a quantitative study with 1,146 participants to examine three different types of control during labour and explore how the control types related to each other. The three types of control were described as control of own behaviour, control over professionals and control during contractions. A distinction was also made between internal (control over own body) and external control (decisions made in relation to labour and over medical staff). For women in the study, 40% felt they had control of what staff were doing, 61% felt in control of their behaviour, and 53% felt in

control during contractions. The findings also suggested that all three types of control were important and each contributed to psychological outcomes in different ways. Feeling in control of own behaviour was associated with pain and methods of pain relief, as low levels of pain were associated with a six fold increase in the odds of feeling in control compared with the highest levels of pain (Green & Baston, 2003). Control over professionals related to interpersonal variables, especially being treated with respect. Control during contractions was predicted by pain-related variables, both the pain experience and worries of pain during pregnancy. Satisfaction with the birth experience was positively related to experiencing each of the three measures of control.

Similarly, a qualitative study using birth narratives of 101 women in the United States sought to deconstruct the term control as used by childbearing women in order to understand the concepts and issues that underpin it. A framework for sampling for the study was developed to capture the diversity of birthing experiences in the US, and included women who birthed in various locations, different modes of delivery, with a range of professional care providers. Five distinct domains of control were identified through the women's birth narratives. Firstly, *self-determination* related to the desire for women to determine courses of action in her birth relating to her body, the environment and decisions. Secondly, *respect* meant that women were listened to, acknowledged and well-regarded by others. This concept also related to a women's own sense of self-respect and dignity. Thirdly, *personal security* encompassed feelings of physical safety and psychological attributes of security such as comfort and confidence in the environment. Fourthly, *attachment* was defined in this study as an emotional closeness or a sense of connectedness to other people involved in the birth. Lastly,

knowledge referred to an understanding or familiarity with the physical and psychological aspects of birth (Namey & Lyerly, 2010). One of the paradoxes examined in this study was that women and professionals often seek control during the birth process, despite birth being an experience that is understood to be uncontrollable in many ways. Within this study, half of the women recognised an absence of control over their birth with sentiments such as, “You don’t really have control over what’s going to happen”. Namey and Lyerly (2010) further describe that the absence of control in birth added a layer of complexity to what women mean when they talk about control in relation to birth.

A concept analysis of 34 studies relating to control in childbirth was completed, with databases searched between 1970 - 2011 using the keywords ‘control’, ‘childbirth’ and ‘delivery’ (Meyer, 2013). Of the 20,017 citations identified, the citations were reduced to 97 studies. A set of criteria was then applied, which included only studies that focussed on women’s perceptions of control during the timeframe of labour and birth, which reduced the final number of studies to 34. Both qualitative and quantitative studies were included within the criteria, and the studies were from nine different countries and included women who had birthed in a variety of birth locations, modes of delivery and pain relief methods. The concept analysis developed four clusters of attributes, allowing for broad insight into the concept of control in childbirth. The first cluster, *decision-making*, relates to a woman’s sense of being an active member of the decision-making process during their labour and birth. *Access to information* revolves around women’s access to information and knowledge relating to their labour. *Personal security* is concerned with women’s sense of trust, respect and support from professional care providers. Finally, *physical functioning* relates to the

women's sense of control over their pain, bodies and emotions. This study contributes to literature that supports the idea that women who experience a sense of control during their labour and birth ultimately have a more positive experience or higher level of satisfaction (Green & Baston, 2003; Meyer, 2013). Based on the empirical evidence, there is strong support for the relationship between perceived control and the birth experience.

Midwife/professional support

The effect of support during childbirth has been well researched. Although there has been much attention dedicated to the topic, it is often difficult to distinguish between the type of professional support and social support that a woman receives. This review is concerned with the role that the midwife has in supporting women during their pregnancy and labour and the impact of this support on the birth experience. Often studies concerning support in labour combine professional support and social support given by a significant person chosen by the birthing woman. Although midwife support during labour appears to be a strong predictor of birth experience (Lundgren, Karlsdottir, & Bondas, 2009; Michels et al., 2013), there are some studies that do not confirm this relationship (Bryanton et al., 2008). The literature relating to professional support and the birth experience suggest the following associations: quality of the relationship between woman and midwife (Lundgren et al., 2009; Lyberg & Severinsson, 2010), women's perceptions of the care received from the midwife (Sigurdardottir et al., 2017), and the role that the midwife plays in the labour and birth (Dickson, 1997; Fahy & Parratt, 2006; Halldorsdottir & Karlsdottir, 1996; Waldenström et al., 2004).

The quality of the relationship between birthing woman and midwife has been explored in several studies (Leap, Sandall, Buckland, & Huber, 2010; Perriman, Davis, & Ferguson, 2018; Walker, Hall, & Thomas, 1995). The findings of these suggest that trusting relationships are an important part in a woman's birthing experience, particularly for the emotional aspect of birth. Lundgren et al. (2009) explored the childbirth experience as part of a meta-synthesis project about childbearing in Nordic countries. Three interview studies with 29 participants were used, and women birthed in either a birth centre or hospital. Women's experiences were described two to twenty years after the birth took place. The results from this study found that the relationship with the midwife was most important for women in their birth experience, and the memories that women had of their midwife were long lasting. Women in the study described that the midwife was able to instil strength, confidence and safety in them. The women also described that the midwife would listen to them and was someone that knew the technical aspect of birth but was also good at establishing and maintaining relationships (Lundgren et al., 2009). The main conclusion from this study was that it is important to focus not only on the physical and medical aspects of birth, but also the relationship between birthing woman and midwife. By doing this, it helps women feel empowered about their choices and their ability to cope so that they are supported throughout their birth experience.

A New Zealand based study examining the birth experiences of ten first-time mothers found that the midwife relationship was a key aspect that enhanced their birth satisfaction (Howarth, Swain, & Treharne, 2011). Semi-structured interviews were used to gather in-depth insight into these women's experiences. The women were aged between 24 to 38 years, and were interviewed between 11

days to 16 weeks of giving birth. The theme “midwife relationships” related to the impact that the midwife had on women’s birth experiences. Women in this study expressed that being able to relate to the midwife was important, and for Māori that also meant having a midwife that was able to address cultural needs. The findings emphasise the role of the midwife in giving birthing women a sense of security and reassurance during labour. Women in this study were looking for a close and personal relationship with their midwives in which they felt comfortable, that their midwife understood that pregnancy and birth was a unique experience for each birthing woman, that women were guided in their own birthing processes, and that midwives were aware of the women’s personal wishes and needs in order to advocate for them if needed, particularly when interventions were required.

A Finnish study found a relationship between positive experience of mother being cared for by midwife and positive experience of childbirth. The more positive the mother was about the care she received from the midwife, the more positively she experienced birth (Tarkka & Paunonen, 2000). Questionnaire data was collected from 326 first-time mothers, and used instruments developed by the authors of the study to measure birth experience, characteristics of the midwife, and social support received from the midwife. More than half of the mothers (61%, $n = 165$) found the birth experience to be difficult and demanding. For nearly half of the mothers, delivery was an unpleasant experience, and one in four found their birth experience was frightening. For the mothers in this study, on average they experienced childbirth as something more negative than positive. In multivariate analyses, the most important predictors for the nature of the childbirth experience were the characteristics of the attending midwife, attitude of

the child's father towards the pregnancy and the duration of delivery. This study found that the midwife's role in the labour was an important factor that was associated with the mother's childbirth experience. The measured characteristics of empathy, friendliness, tenderness, calmness, alertness, peacefulness and the professional expertise of the midwife were reported as being important to a positive birth experience for mothers in this study. This study emphasises that positive childbirth experiences of first-time mothers are furthered by the interpersonal qualities of the midwife, including professional and technical skills.

A positive childbirth experience and satisfaction with the care received during labour and birth have been linked with better postnatal functioning (Michels et al., 2013). A study explored the relationship between a woman's satisfaction with her care during labour and birth and her psychological functioning after birth. The study was based in Queensland, Australia and gathered quantitative data from 664 women. The birth experience was assessed using a single item asking women to assess their birth on a scale from 1 (very negative) to 5 (very positive). From this, women were categorised into two groups, 1-4 and 5. Psychological functioning in this study was measured in terms of two psychological symptoms (depressed feelings and baby blues), two traumatic stress type symptoms (flashbacks, poor sleep not related to baby) and rated in terms of frequency (Never, Rarely, Sometimes or Often) and a dichotomised measure of low or high psychological functioning. Overall, 63% of women were very satisfied with their labour and birth care and 49% had a very positive experience of birth. In regards to postnatal functioning, 56% of women reported low postnatal functioning, while 44% experienced high levels of postnatal functioning. The results of this study showed that women who believed they were well cared for during labour and birth, and

women who had a very positive birth experience were more likely to experience high postnatal functioning. The study found that satisfaction with birth care and the birth experience are associated with maternity care services, and therefore concludes that providing good maternity care not only improves the likelihood of a positive childbirth experience, it can also increase the likelihood of improving postnatal functioning (Michels et al., 2013).

A longitudinal cohort study with a convenience sample of pregnant women from 26 community health centres in Iceland found that women who were not satisfied with midwifery support during their labour and birth were more likely to have a negative birth experience than women who were satisfied with midwifery support (Sigurdardottir et al., 2017). The study used questionnaires gathered at three time points: between 11-16 weeks of pregnancy (T1, n = 1,111), five to six months after birth (T2, n = 765), and at 18-24 months after birth (T3, n = 657). Overall, 66% of women found their birth experience to be very positive at T2, while 68% found their experience to be positive at T3. This indicates that the perception of the birth experience average does not change significantly over time. A third of women perceived their births to be both positive and negative at both T2 and T3. Logistic regression analysis showed that women who were not satisfied with the support from their midwife during birth were approximately six times more likely to report a negative birth experience compared to women who were satisfied with the support they received from their midwife (Sigurdardottir et al., 2017). The results suggest that support from the midwife during birth is important and has strong links with women's the birth experiences.

Dahlberg et al. (2016) conducted a qualitative study that examined the experience of first-time mothers in Norway and how their midwives could

promote a positive birth experience. Semi-structured interviews with twelve women who experienced a normal (spontaneous vaginal) were conducted five to six weeks after giving birth. Two key findings emerged from this research: “To be seen as an individual”, and “Health-promoting perspective”. The first, “To be seen as an individual” placed emphasis on women’s desire to be seen as an individual, which meant that they wanted to be cared for according to their individual needs for emotional support. The results reported that midwives who appeared happy, supportive and calm were important for the women’s confidence, and made them feel cared for. The presentation of the midwife was important for creating a relaxed environment, as when a midwife was calm, they were able to have a calming effect on the birthing woman and her partner. In reverse, if the woman’s midwife appeared to be stressed, they felt the effect of this stress. In this way, the atmosphere created by the midwife’s presence during labour and their ability to establish a trusting relationship promote positive birth experiences (Dahlberg et al., 2016). The second, “Health-promoting perspective”, relates to women reporting the midwife’s role in coaching, supporting and being present during the birth. In these instances, women reported that they felt well supported, confident and gained inner strength from their midwife, which helped the women to cope with the circumstances of their birth experience.

In contrast, one study found nurse/midwife support did not feature highly in their predictive models of childbirth satisfaction. A Canadian study by Bryanton et al. (2008) looked at factors that predict women’s perceptions of the childbirth experience and examined these factors according to the type of birth that a woman had (vaginal, emergency caesarean or planned caesarean). This prospective cohort study used self-report questionnaire data that was collected in

hospital between 12 to 48 hours postpartum from 652 women. The main outcome variable was birth perception, and it was measured using the Questionnaire Measuring Attitudes about Labour and Delivery (QMAALD), a 29-item measure that asked questions relating to labour and birth. Women that gave birth by planned caesarean used the *Modified* QMAALD. The QMAALD measured attitudes about labour on a 5-point scale and included variables relating to confidence, relaxation, control, involvement in decision making, and partner support. The strongest predictors from this study were type of birth, degree of awareness, relaxation and control. Nursing support was thirteenth on the list of predictive value across all birth types, fourteenth for vaginal birth, tenth for emergency caesarean and fifth for planned caesarean. This finding does not concur with other literature on the topic, as nurse/midwife support was found to be one of the strongest predictors of birth perception in several studies (Waldenstrom, 1999; Waldenström et al., 2004). The reason why nursing/midwifery support did not rate higher in their predictive model was unclear. However, the researchers suggest that it could be because they focused on nursing support, rather than specific midwifery support. The researchers suggest that many of the predictive factors in the model are influenced by the care and support nurses provide. An understanding of the Canadian maternity system and the relationship between nurses, midwives and other professionals involved in the birthing experience may add further insight into these results and their implications for practice in New Zealand.

Pain management during labour

Childbirth is considered to be one of the most painful events in the lives of women, and can often resonate in individual and collective memory for years

(Chajut, Caspi, Chen, Hod, & Ariely, 2014). However, the intensity of childbirth pain that a woman may experience varies. Some research suggests that up to 50% of the variability in childbirth pain is due to psychosocial factors such as support during labour (Dannenbring, Stevens, & House, 1997). Labour pain is different to other types of sources of pain, as it is part of a normal physiological process, not an indicator of underlying pathology (Aksoy et al., 2016). For pregnant women, the anticipated pain of childbirth can be a major concern. Because labour pain is a sensory perception event, it means the pain experience is subjective and can differ substantially from one woman to another (Lally, Murtagh, Macphail, & Thomson, 2008).

Based on a review of existing labour pain literature, Whitburn, Jones, Davey, and McDonald (2018) further emphasise that labour pain is a highly individualised experience that is different from other types of pain due to the meaning, challenge and emotions that women associate to the pain experience. The aim of the Whitburn et al. (2018) study was to review understanding of labour pain based on modern pain science, and provide an explanation to why women experience labour pain so differently. The study identified the key determinants and influencers of labour pain and grouped them into cognitive, social and environmental factors. The study concluded that if a woman sustained beliefs that labour pain was purposeful, if she interpreted the pain as productive, and the birth environment as safe and supported, it would be likely that she would experience the pain as a non-threatening, transformative life event (Whitburn et al., 2018).

Previous studies have suggested a relationship between birth experience, maternal anxiety and fear of birth (Ayers & Pickering, 2005; Henriksen,

Grimsrud, Schei, & Lukasse, 2017). Fear of pain is often the reason cited for women's fear of birth (Hofberg & Ward, 2003). However, fearful women with free access to analgesic drugs during labour are still likely to experience childbirth negatively and suffer emotional imbalance postpartum (Hofberg & Ward, 2003), indicating that the issue may be more complex. Fear of birth has been associated with requests for caesarean section due to fear of pain during labour (Tschudin et al., 2009). Pregnant women anticipate that their impending labour may be painful and face decisions in regard to how they will cope with the pain. There are many different methods of pain relief available to birthing women, ranging from physical methods (walking, pacing, using a Swiss ball, water), cognitive methods (breathing, mindfulness), to pharmacological methods (Entonox, epidural). Social and cultural values, and changes in medical technology have influenced pain management options and choices during childbirth (Zwelling, 2008).

Hodnett (2002) further emphasizes the complex nature of the relationships between childbirth satisfaction, labour pain and analgesia. To explore this complex relationship, they completed a systematic review to summarise the knowledge about satisfaction and childbirth, specifically focusing on the role of pain and pain relief. The review summarised data from 137 studies of factors related to women's childbirth experiences published between 1973 and 2000. Four factors were identified as being more important than pain and pain management in women evaluating their birth experiences: personal expectations, the amount of support from caregivers, the quality of the caregiver-patient relationship, and involvement in decision making. The study concluded that the impact of pain and pain relief are not direct, or obvious, nor as powerful as the influences of professional support.

Satisfaction with birth and reduced pain experiences during labour were found to be predicted by strong birth self-efficacy beliefs in a study by Berentson - Shaw et al. (2009). The objective of this New Zealand longitudinal study was to determine whether birth self-efficacy beliefs predicted pain perceptions in labour, and whether self-efficacy predicted birth satisfaction in primiparous women. Participants were recruited through community advertisements and were required to be no more than 20+6 weeks gestation and over 18 years old. The sample used for this study was not a representative of the New Zealand population, as a high proportion of the participants were more educated and of European/Pākehā descent. Two hundred and fifty-five women took part in the study. A composite measure of satisfaction was used, comprising of the Women's View of Birth and Labour Questionnaire Version 4 (WOMB), and a dichotomous question 'Overall, are you satisfied with the way your birth and labour went', and an evaluation of the care they received from their Lead Maternity Carer (LMC). A composite measure of pain perception was used, consisting of a Graphic Rating Scale (GRS) and the short-form McGill Pain Questionnaire (SF-MPQ). The authors concluded that strong self-efficacy beliefs appear to help women in labour interpret pain as less intense and distressing, and women who had high levels of self-efficacy would use more cognitive and behavioural strategies to cope with pain.

Pain relief methods complicate the relationship with pain and the birth experience, and the literature is inconclusive in this area. While some studies suggest that using cognitive forms of pain relief or no analgesia is related to a positive birth experience (Hildingsson et al., 2013; Hodnett, 2002), others suggest that the use of analgesia, particularly epidural analgesia, has the potential to

contribute positively to women's birth experiences depending on women's wishes and expectations of pain management (Hidaka & Callister, 2012; Soliday, Sayyam, & Tremblay, 2013). Overall, the research about pain and the association with positive birth experiences is complex. The perception of pain has been identified as a strong predictor of overall childbirth experience (Bryanton et al., 2008; Dannenbring et al., 1997), but there are other factors that add complexity to that relationship.

Maternity care in New Zealand

Findings from Bryanton et al. (2008) suggest that maternity care systems may offer some explanation for differences in women's birth experiences. New Zealand women have access to free maternity care from early pregnancy until six weeks after the birth of baby. The health care system in New Zealand is based on the premise of collaboration and informed consent, meaning that a woman and her whānau have the right to respect, appropriate standards of practice, effective communication and adequate information according to the New Zealand Public Health and Disability Act 2000. Continuity of care is a core feature of New Zealand's maternity system, and pregnant women are able to choose a LMC who will care for them during pregnancy and six weeks after baby is born (Grigg & Tracy, 2013). The role of the LMC is to develop a plan with the woman, including labour and birth, monitor and encourage staying healthy during pregnancy which includes offering screening tests and scans to check both mum and baby are healthy, be with the woman during labour and birth, visit at hospital to check both mother and baby after the birth and conduct home visits for six weeks after baby is born (Ministry of Health, 2016). The LMC is a midwife for the majority of

women, but can also be a private obstetrician or General Practitioner (GP). Women can choose where they would like to give birth, either at home, in a maternity unit (birthing centre or community hospital maternity units), or at hospital.

In 2015, the vast majority (96%) of women in New Zealand gave birth at a maternity facility, with 10% giving birth in a primary birthing facility, 4% opting for a planned home birth and 86% birthing at hospital (Ministry of Health, 2017). Women have the option to birth at a birthing centre, a facility designed for women with low risk pregnancies who have no complications during their pregnancy and are likely to experience birth without complications (Ministry of Health, 2016). Birth centres are managed and run by midwives. Women who give birth in these centres are likely to use less pain relief and have fewer caesarean sections and assisted vaginal births than those who give birth in hospital (Ministry of Health, 2016). However, these outcomes may be influenced by the lack of availability of epidural analgesia at birthing centres, and because women with high-risk pregnancies are encouraged to give birth at the hospital. Once the baby is born, women are able to stay in hospital or at the birthing centre for a few days after birth to receive care from hospital-based midwives. This is a time where midwives are able to assist women with recovering from birth, breastfeeding and learning how to care for a baby.

The current study

The main purpose of this study is to investigate the factors that are associated with positive childbirth experiences in a group of New Zealand women. There is a considerable gap in the literature when considering positive birth experiences in

New Zealand maternity care context. Although international literature does give insight into some of the factors that influence a positive birth experience, the majority of research has been carried out in European countries, and it is uncertain to what degree that they can be applied to New Zealand's societal and cultural values. Therefore, the aims of this study are as follows:

1. To identify factors associated with positive childbirth experiences for a group of New Zealand women
2. To explore the birth narratives of women who have a lived experience of positive childbirth
3. To explore the associations between perceived control, pain and midwifery support on women's ratings of their childbirth experience

In line with the research that was reviewed, the following hypotheses are proposed:

Hypothesis 1: There will be a positive correlation between perceived control and the birth experience

Hypothesis 2: There will be a negative correlation between pain and the birth experience

Hypothesis 3: There will be a positive correlation between midwifery support and the birth experience

Chapter Two: Methodology

As described in the previous chapter, the main purpose of this study is to investigate the factors that are associated with positive childbirth experiences in a group of New Zealand women. In addition, the study seeks to examine how the factors of perceived control, pain and professional support import impact on the childbirth experience

The researcher

It is important as a researcher to be aware and acknowledge personal biases, assumptions and beliefs, and that these aspects are unable to be separated from the research itself. Therefore, it is important that these aspects are understood as they may shape and influence my understanding of the experience of birth. I gave birth for the first time in 2016, and I consider it to be one of the most empowering experiences of my life. While I was pregnant, I did not come across many positive narratives of childbirth, which further fuelled my curiosity in this topic. A positive birth experience was the catalyst for pursuing this research topic, and may be a strong influence in my perspective of birth.

Mixed Methodology Research

Both quantitative and qualitative methods were used within this study, which enabled different aspects of the research objectives to be addressed. Mixed method research is the type of research in which elements of qualitative and quantitative research approaches are combined for the purposes of breadth and depth of understanding and corroboration (Johnson, Onwuegbuzie, & Turner, 2007, p. 123). It is a research method that can be viewed as an approach that draws on strengths of each method, recognising the existence and importance of

the physical, natural world as well as the importance of reality and influence of human experience (Johnson & Onwuegbuzie, 2004). The quantitative aspect of the research used an online self-report questionnaire to gather data relating to the birth experience; the qualitative aspect explored birth narratives of a smaller group of women. Qualitative data provides a detailed understanding of the phenomenon while quantitative research facilitates understanding that arises from examining a larger number of people and assessing responses to selected variables (Creswell & Plano Clark, 2017). The use of mixed methods research is inclusive, and encourages the use of multiple world views or paradigms that fit in with the aims of this study and the participants within it. While mixed method research has many advantages, it is recognised that different methods have their own strengths and weaknesses. Mixed method research means that researchers have to learn multiple methods and understand how to mix them appropriately, and may encounter challenges in analysing and interpreting conflicting results (Johnson & Onwuegbuzie, 2004).

I considered a mixed method research design to be the best approach to exploring positive childbirth experience, as mentioned above each method offers its own advantages and disadvantages, and when they are combined, they give the research more breadth and depth than would be achievable with a single method. Examining a positive birth experience in both qualitative and quantitative ways offers an opportunity for deeper understanding. Using a quantitative method gave me the opportunity to determine the strength of the relationships between the birth experience and key variables which may have implications for practice. The opportunity to listen to childbirth narratives of the same women in this study

allowed the women to describe the phenomena in their own words, thus giving further validity to the findings of the study.

The data collection for each of the methods occurred sequentially. At first, the survey data was collected, and then women were selected to participate in the interview study based on their subjective appraisal of birth. Although the data collection was sequential, both research methods were given equal weight in the analysis phase. The data provided from each research method was analysed separately, and then synthesised. Following on from this, each of the two research methods are explained separately.

Quantitative Predictors of Birth Experience

The data and participants from the current research project were part of a larger pilot study that looked at the usefulness of a mobile app designed to help pregnant women manage the challenges and changes of pregnancy. The larger pilot study was given ethical approval by the University of Waikato Human Ethics Review Committee of the School of Psychology (#17-01). Ethical considerations for the current study will be discussed within the birth narrative section of this chapter.

The larger pilot study used four questionnaires to gather data relating to pregnancy and birth. Women were asked to complete surveys at three points during their pregnancy, and once after baby's birth. The points in time were at their entrance into the study (before 20 weeks gestation), 24 weeks gestation, 36 weeks gestation, and 1 month after baby's due date. These surveys were self-reports and were completed online. This allowed an opportunity to observe a number of behaviours over the course of pregnancy and into early parenthood, which could then be explored in relation to the birth experience. The survey

collected participant demographic information, stress, anxiety and depression levels, obstetric information and perceptions of the birth experience.

Research Participants

The participants were recruited as part of the larger pilot project. In order to be eligible to participate in the pilot project, women were required to:

- be in the first half of pregnancy (less than 20 weeks gestation);
- be over 16 years of age;
- own and use a smartphone; and
- able to understand and converse in English.

At first, recruitment of participants was restricted to people living within the Waikato region. After two months of local recruitment, the geographical restrictions were lifted, which meant women from all over New Zealand were eligible to take part. Recruitment was completed between March to June 2017.

Participants were recruited through midwives, GP's, support services for pregnant women, media releases, posters in community spaces, speeches, business cards, word of mouth and social media. A Facebook page and website were set up for the larger pilot study to attract potential participants. Posts were also shared on the personal Facebook pages of the people that were part of the larger pilot research team.

A total of 176 women inquired about taking part in the pilot study during the recruitment phase for the overall sample. From this number, 89 women chose to take part in the pilot study. Women had to complete all four questionnaires in order to be included in the current study. Fifty-four women participated in the

study and their demographic characteristics are presented in Table 1. The median age of the mothers was 30.5. As can be seen, the majority of the participants in this study identified as New Zealand European/Pākehā (79.6%) followed by Māori (13%). Just over half of the women (52) were primiparas (first time mothers). The women within the sample had high levels of education, with 83% having completed a tertiary qualification.

Table 1

Demographic characteristics of participants

	N (n = 54)	%
<i>Age</i>		
18-24	3	4%
25-29	17	31%
30-34	19	35%
35+	16	30%
<i>Ethnicity</i>		
New Zealand European/Pākehā	43	79.6%
Māori	7	13%
Other	9	7.4%
<i>Highest education</i>		
None	1	2%
High school	4	7.5%
Some tertiary	4	7.5%
Tertiary	20	37%
Graduate	25	46%
<i>Parity</i>		
Primipara	28	52%
Multipara	26	48%

Materials

- Information sheet for pilot and current study (Appendix A)
- Consent Form for pilot and current study (Appendix B)
- Email invitation for current study (Appendix C)
- Questionnaires (Appendix D) including:
 - Online website where participants completed questionnaires
 - Depression Anxiety Stress Scale (DASS-21)
 - Childbirth Experience Questionnaire
- Support resources sheets for mothers (Appendix E)
- Recruitment material for pilot study (Appendix F)

Measures

Childbirth experience rating. For the current study, the main outcome variable was women's perception of their birth experience. This was collected one month after the woman's due date, and was assessed on a 5-point Likert scale. The scale of experience ranged from 'very positive' to 'very negative'. If a participant scored a 5, this meant that she had a very positive childbirth experience. Hildingsson et al. (2013) used this same scale in their research looking at factors associated with a positive birth experience, but further dichotomized the variable into '*very positive birth experience*' versus all other options, under the assumption that this would allow them to get a clear picture of what really works in order to improve intrapartum care. However, for the purposes of this research, a positive birth experience is a score of 4 or 5. This was to capture the experiences of women who still considered their birth to be positive

overall, but may have experienced difficulties that may have prevented them from scoring a 5.

Childbirth Experience Questionnaire (CEQ). The CEQ was developed in Sweden in 2010 to study women's perceptions of their first labour and birth (Dencker, Taft, Bergqvist, Lilja, & Berg, 2010), and was validated in primiparous women. The CEQ is an acceptable standardised measure that sufficiently quantifies women's psychological and emotional wellbeing during their birth experience. The CEQ is a 22-point questionnaire which measures 4 main domains of the childbirth experience. The domains of the childbirth experience are as follows; *Own capacity* (8 items, concerned with women's sense of control and personal feelings during childbirth and labour); *Professional support* (5 items, in relation to midwifery care and how informed women were kept during their labour); *Perceived safety* (6 items, concerned with women's sense of security and memories of childbirth); and *Participation* (3 items, asking about women's opportunity to influence the birthing situation during labour) (Dencker et al., 2010). Walker, Wilson, Bugg, Dencker, and Thornton (2015) demonstrated that the CEQ was a valid and reliable measure of childbirth experience in the UK population, the first time it had been validated in an English-speaking population. The CEQ has also been validated for use in populations of women's perceptions of labour and birth in Spain (Soriano-Vidal et al., 2016).

Depression Anxiety Stress Scale (DASS-21). The DASS-21 is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress (Lovibond & Lovibond, 1995). The short form version was developed to reduce administration time and has been used widely in clinical samples to screen for symptoms and severity of depression, anxiety and stress

(Lovibond & Lovibond, 1995). Examples of the items in the DASS-21 include “I found it difficult to relax”, “I felt I wasn’t worth much as a person”, and “I felt scared without any good reason”. The DASS-21 was been validated in a number of populations (Crawford et al., 2009; Norton, 2007), and is psychometrically sound with good reliability and validity.

Data Analysis

Data from all four assessment points were used to conduct the analysis for the current study. Data was downloaded into SPSS version 25, checked for accuracy and recoded as necessary. Descriptive statistics were used to explore the data and evaluate its normality before performing statistical tests. The data was tested for normality, and was found to be not normally distributed, and therefore non-parametric tests were used for the analysis. Spearman’s rank-order correlation was used to examine the relationship between the birth experience and other key variables. The Mann Whitney *U* Test was used to test the relationship between the variables of parity and labour complications with the birth experience. The Kruskal-Wallis *H* test was used to compare types of birth and the birth experience.

Exploration of positive childbirth narratives

Qualitative research methodology, in the form of semi-structured interviews, was used for data collection which allowed women to share their own experiences of childbirth. All women were asked the same question to start the interview; they were asked to share their birth story, starting at whatever point they wanted to, the nature of this question allowed participants to talk freely about whatever things they thought were important for their own birth experience without interruption. Additional questions were asked after their story was told, in order to seek

clarification or to add further detail to points that participants had raised earlier in the interview, this required a flexible approach to interviews to match the response of the participants. The advantage of this method of questioning was that it allowed participants to suggest ideas that were important to them that may not have been previously discovered in the literature.

Ethical approval

Ethical approval was gained for the qualitative component of the study in September 2017. This was approved by the University of Waikato Human Research Ethics Committee (Health). The reference number for this was #2017-36. Specific detail of key ethical considerations for the overall study are detailed below.

Privacy, confidentiality and anonymity of participants. Participants were made aware that their participation in this research project would be kept confidential, which meant that nobody else would be told that they were involved in the research. A way of keeping participants' identities hidden was anonymising identifying information that they provided. By providing anonymity to the participants, I hoped that they would feel as though they were able to openly share information about their experience with me.

Informed consent. It is vital that explicit informed consent is gained from participants in research, in accordance with the Code of Ethics for Psychologists working in Aotearoa/New Zealand (New Zealand Psychological Society, 2002). During the process of recruitment and interviewing, I made participants aware of the research and what was involved. I sent information about the project to participants when I first made contact with them, so they would be aware of the

type of questions that would be asked and what their information was going to be used for (Appendix A). Once a meeting was scheduled, I explained the purpose of the research and offered mothers an opportunity to ask questions about the research before they consented to participating.

Responsiveness to Māori. It was important that research methods used in this study were culturally appropriate and considered the spirit of Te Tiriti o Waitangi, ensuring that none of the research procedures would be harmful, distressing or offensive to Māori participants. The development of the interviews and schedule was completed with cultural supervision (second supervisor). It is also important to acknowledge my own cultural identity as Māori, and that my life experiences as Maori may influence and guide the interpretation of the findings in this research.

Potential participant distress. In discussing birth experiences, although each of the women that had been chosen to be interviewed had experienced a positive birth, it was possible that there may have been some distress when talking about difficult situations, as birth is known to be an experience that can have both positive and negative elements to it. To prepare for this, I created a detailed action plan in the event of participant distress, and provided a resource list of support organisations for new mothers (Appendix F).

Participants

Five women in the birth narrative study were recruited from the Positively Pregnant pilot study, and one woman was recruited through personal networks. All of the women who took part in the birth narrative study had given birth within the past six months and had subjectively rated their birth as being a positive or

very positive experience. Women participating in the pilot study were asked in the final postnatal questionnaire if they consented to be contacted in regards to participating in the current study. Of the 54 women in that study, 14 women consented to be contacted. From these 14 women, I emailed eight women who had rated their birth experience as a 4 or 5 (positive/very positive) to invite them to participate in this study. Five women agreed to be interviewed, two did not reply and one lived outside of the Waikato region. Demographic information about the women is in Table 2 below.

Table 2

Demographic information of participants

<u>Pseudonym</u>	<u>Age</u>	<u>Parity</u>
Maia	28	Multipara
Amber	19	Multipara
Penelope	39	Multipara
Ashley	23	Primipara
Laura	34	Multipara
Kate	27	Primipara

Overall, the participants were between 19 and 39 years old. They were predominantly of Pākehā descent. There were two first time mothers and four mothers who had previously given birth. In regards to the participant's desired location to give birth, five women expressed a preference to give birth at the birth centre and one had a preference to birth at home.

Interview procedure

Interviews were held with participants in order for them to share their own experiences of their labour and birth. I used a responsive style of interviewing, which emphasises the importance of trust between the researcher and participant, with a tone that is gentle and non-confrontational (Rubin & Rubin, 2012). All of the interviews took place at a location suggested by the participant, and all of the mothers decided that their home would be the most convenient location. As interviews were conducted in participants' homes, women were more likely to feel comfortable and relaxed, and that would mean that they would be more open in sharing their experiences with me. I emphasised to each participant that I was able to be flexible with dates and times in order to accommodate each mother and baby's schedule. I sent a text message to the participant the day of the interview, to ensure that they were willing to proceed with the interview.

Before each interview began, I asked the participant if they had a preference for how to open our meeting. I introduced myself and my position as a graduate psychology student and mother. After that, the participant was given a brief overview of the research aims and what information was going to be collected from the interview. The participant was also given the opportunity to ask further questions about the research, and were informed of their right to withdraw from the research if they wanted to. Once the participant had agreed to take part in the research and consented to being recorded, the consent form was signed. All interviews were audio recorded using a Dictaphone. Notes were not taken at the time of the interviews, as I considered it important to connect with the participants, and note taking may have been perceived as impersonal and disruptive. I provided morning or afternoon tea as a way of welcoming the

participant into a safe interviewing space, and to show the participant hospitality and respect in the research process.

To open the interview, participants were asked to tell their birth story in their own words, starting at whatever place they felt like starting, with minimal interruption. This was done so the participant would be able to start in a place in the story that they thought was most relevant, and would allow the information to flow in a natural way. After the participant had told their story, I asked specific questions to clarify parts of their story to help the researcher understand their meaning. Because the questions that were asked were in relation to what participants had said in their own retelling of their stories, it meant that it reduced the impact that the researcher may have had with preconceived ideas of the birth experience. This meant there was no set structure of interviews across each of the women, allowing for themes to present themselves as naturally as possible. During interviews, I took the role of active listener, and in some instances, I disclosed information about myself and my own experience of birth to be able to strengthen the relationship of trust and to be able to relate to my participants.

Interviews were recorded and full verbatim transcripts were created. This was important as the words that the participant chose to describe their experiences held meaning and without verbatim transcripts could have been subject to researcher bias. It also meant that that I could listen to the interview again and pick up on themes that I may have missed the first time around. Having verbatim transcripts was helpful as it allowed comparison across all of the interviews, and helped to develop themes across all interviews.

During the transcription phase, identifying details such as names were anonymised, and in some cases extra notes were included to indicate the way that participant expressed their words and what they meant. For example, participants would say things with humour and this was noted in the transcription, especially when the words did not fit with the non-verbal cues given. Within four weeks of the interview date, the transcription was completed and emailed to each participant. Participants were given two weeks to review the transcription and to provide feedback, propose changes, or additional information. In the same email, participants were reminded that if a response was not received within two weeks, it would be assumed that they were satisfied with the transcript. Each participant was also given two weeks from receiving their transcript to withdraw from the research if they wished. No changes were made to any of the transcripts.

Thematic analysis

The interview transcripts were analysed using a process of thematic analysis. Thematic analysis is described as a method for identifying, analysing and reporting patterns and themes within qualitative data (Braun & Clarke, 2006). An inductive approach was used for this research, as this meant that the information from participants guided the interpretation, rather than having set ideas and themes and then searching for them (Braun & Clarke, 2006; Rubin & Rubin, 2012).

The majority of the analysis of the transcripts was completed using NVivo version 11 software. Braun and Clarke (2006) outline six steps in their thematic analysis process. The first step involves becoming familiar with the breadth and depth of the data, which was completed during the transcribing process. The

second phase is to create codes, which is finding statements that are similar or are assumed to have the same or similar meaning (Braun & Clarke, 2006). The third phase is the search for themes, which is done by sorting different codes into potential broader themes. Themes represent a level of meaning or patterned response from within the data set and were used to classify information in relation to the research question and aims (Braun & Clarke, 2006). Phases four and five involve reviewing, defining and naming the themes, and the development of thematic maps assisted in clarifying the codes, subthemes and themes that emerged from the transcripts. Finally, step six describes the write up of the findings into the final report, which is described in Chapter Four.

Chapter Three: Survey Results

Experiences of childbirth

The Global Birth Experience (GBE) was measured using a five-point Likert scale. As seen in Table 3, 35% of women in the study reported having a very positive childbirth experience, and 30% of women reported a positive childbirth experience. Of the 35% of women who had a less than positive experience overall, nearly half rated their birth as a very negative experience. For further analysis, the GBE was dichotomised into two categories, *positive birth experiences* (very positive and positive) and *less than positive birth experiences* (mixed, negative and very negative) due to the small numbers in the individual categories.

Table 3

Global Birth Experience measured one month after birth

Rating Scale	<i>N</i>	%
	<i>(N = 54)</i>	
Very positive	19	35.2
Positive	16	29.6
Mixed feelings	8	14.8
Negative	2	3.7
Very negative	9	16.7

Table 4 shows the mean and the standard deviations of the subscales of the Childbirth Experience Questionnaire (CEQ). Within the CEQ, the control, pain, and security are items rated on a 1-6 scale; these items are included in the

subscales, but are also shown separately in Table 4 because they measure specific constructs found in prior studies to be relevant to the birth experience.

Table 4

Means of CEQ and domain values

CEQ Domain	Mean (SD)
Own Capacity	2.60 (.61)
<i>Control*</i>	3.04 (1.57)
<i>Pain*</i>	3.63 (1.56)
<i>Security*</i>	3.98 (1.22)
Professional Support	3.6 (.79)
Perceived Safety	3.17 (.69)
Participation	3.16 (.99)
Overall CEQ	3.11 (1.47)

* Individual items

The bivariate correlations between the GBE and the CEQ are reported in Table 5. The GBE and the CEQ subscales were significantly positively correlated with each other. Strong correlations were observed for the *Perceived Safety* and *Own Capacity* subscales and the CEQ overall measure, all of which were significant ($p < .001$). In regards to the individual items, there was a strong significant correlation between the control scale and the GBE, and the security scale and the GBE; a small non-significant negative correlation was found between the pain scale and the GBE.

Table 5

Bivariate correlations between GBE and CEQ subscales

	GBE	Sig. (2 tailed)
CEQ – Own Capacity	.743	<.001
Pain scale*	-.210	.128
Control scale*	.749	<.001
Security scale*		
CEQ – Professional Support	.330	.003
CEQ – Perceived Safety	.841	<.001
CEQ - Participation	.472	<.001
CEQ Total	.733	<.001

Background demographics and birth experience

Statistical tests were conducted between the two measures of birth experience (GBE 1 and CEQ), and predictor variables relating to women's background demographics. Table 6 shows women's birth experience according to demographic factors.

Table 6

Demographic variables and birth experience frequencies

	Positive birth experience N = 35	Less than positive birth experience N = 19
Age		
18-24	2	1
25-29	11	6
30-34	16	3
35+	6	9
Ethnicity*		
New Zealand European/Pākehā	27	16
Māori	4	3
Other	7	2
Highest Education		
None	0	1
High school	3	1
Some tertiary	3	1
Tertiary	13	7
Graduate	16	9

* Participants can belong to multiple groups

Spearman's correlation was performed on the true value for age, rather than age groups. The correlation between age and both measures of birth experience were $r = -.225, p = .102$, and $r = -.177, p = .2$ for the GBR and CEQ respectively, which signalled no significant association between age and birth experience. The relationship between ethnicity and the birth experience could not be tested due to the small sample size and lack of statistical power. No significant

correlation was found between level of education and either measure of the birth experience using Spearman's test (GBR $r = -.122$, $p = .379$, CEQ $r = -.173$, $p = .212$).

Measures of emotional distress

Table 7 shows mean DASS scores from the women in the study. At the pre-assessment time point, 13% of women reported at least moderate levels or greater of depression and anxiety, while 16% reported at least a moderate level of stress. At the 24-week assessment point, 9% of women reported at least a moderate or greater level of depression, anxiety and stress. Moderate levels of anxiety and stress or above were reported for 9% and 8% respectively at the 36-week assessment point. Levels of distress for this group of women were compared with a recent sample of pregnant New Zealand women using the DASS (Barber & Steadman, 2018). One sample T tests revealed a significant difference between the current study sample and the comparison group for depression ($t = -6.63$, $p < .001$), anxiety ($t = -5.12$, $p < .001$) and stress ($t = -3.64$, $p = .001$). Pregnant women in the comparison group had higher levels of depression ($M = 7.36$, $SD = 7.004$), anxiety ($M = 7.03$, $SD = 6.46$) and stress ($M = 12.89$, $SD = 7.58$) than pregnant women in current study group at the pre-assessment point.

Table 7

Mean DASS Scores between study group and comparison sample

	Pre- assessment (N = 54)	24-week gestation (N = 49)	36-week gestation (N = 42)
Mean (SD)			
Depression	4.3 (3.39)	4.47 (4.12)	3.52 (3.27)
Anxiety	4.19 (4.08)	3.71 (3.56)	4.10 (3.69)
Stress	9.75 (6.31)	10.37 (6.74)	8.83 (6.42)
Total DASS	18.23 (11.96)	18.65 (12.36)	16.44 (11.46)

Statistical tests were performed to explore the relationship between distress and the birth experience. Table 8 presents the correlations of the distress measures at different points during pregnancy and the birth experience measures. As can be seen in the table below, the only significant association that was determined was a modest negative correlation between anxiety in the first assessment and the overall CEQ score.

Table 8

Correlations between distress measures during pregnancy and the birth experience

	GBE	CEQ
Depression		
Pre-assessment	-.077	-.175
24 weeks	.013	-.154
36 weeks	0.15	-.152
Anxiety		
Pre-assessment	-.093	-.303*
24 weeks	-.093	-.198
36 weeks	.012	-.102
Stress		
Pre-assessment	-.134	-.450
24 weeks	-.077	-.126
36 weeks	-.117	-.043

* Significant at $p < .05$ level (two tailed)
 ** Significant at $p < .01$ level (two tailed)

Obstetric variables and birth experience

Table 9 presents obstetric variables and the GBE. As seen in Table 4.6, 53% of primiparas and 77% of multiparas had a positive birth experience. The majority of babies were born between 37 to 40 weeks gestation, and of these births, 66% were positive experiences. The majority of women (72%) gave birth at hospital, followed by birth centre and home (28%). Of women that gave birth at the hospital, 54% had a positive experience. Most women (93%) who birthed at the birthing centre or at home had a positive experience. The majority of women in the sample gave birth vaginally (72%), followed by emergency caesarean (19%)

and planned caesarean (9%). The majority of women who birthed vaginally (76.9%) or with a planned caesarean (80%) had positive births, while only 10% of women that had an emergency caesarean had a positive experience. Of the women who had labour complications, less than half (40%) had a positive birth experience. In comparison, 86% of women who had no labour complications had a positive birth experience.

Table 10 presents the statistical tests of the relationships between the obstetric variables and the birth experience. No relationship was found between parity and birth experience using the Mann-Whitney U test. A Kruskal-Wallis H test found that there was a significant association between birth location and birth experience, with women who delivered their baby in hospital less likely to have a positive experience. Kruskal-Wallis H test also identified an association between birth type and the birth experience, with women who delivered by emergency caesarean being less likely to have a positive birth experience. Mann-Whitney U test revealed a difference in the birth experiences of women who had labour complications, in that women who had no complications were more likely to have a positive birth experience.

Table 9

Obstetric variables and GBE frequencies

	Positive birth experience N = 35	Less than positive birth experience N = 19
<i>Parity</i>		
Primipara	15	13
Multipara	20	6
<i>Gestation</i>		
No response	1	1
< 36 weeks	2	2
37-40 weeks	27	11
41+ weeks	5	5
<i>Birth Location</i>		
Hospital	21	18
Birth Centre	12	1
Home	2	0
<i>Birth type</i>		
Vaginal	30	9
Emergency Caesarean	1	9
Planned Caesarean	4	1
<i>Labour complications</i>		
Yes	10	15
No	25	4

Table 10

Associations between the birth experience and predictor variables

	GBE	CEQ	Test Type
Parity	1.729	1.255	Mann-Whitney
Gestation at birth	.021	.158	Spearman
Birth Location	9.167**	18.148**	Kruskal-Wallis
Birth Type	16.912**	13.976**	Kruskal-Wallis
Birth Complications	-4.186**	-4.033**	Mann-Whitney

* Significant at p <.05 level (2 tailed)
 ** Significant at p <.01 level (2 tailed)

Chapter Four: Findings from Birth Narratives

This chapter presents the major findings from the birth narratives of women who participated in the interview study. Three overall themes emerged from the birth narratives after a thematic analysis was completed. This chapter will discuss each of the themes and subthemes that were relevant to the ways that women thought or felt about their birth experience. Quotes from the participants are used extensively throughout these findings in order to illustrate evidence for the theme. Pseudonyms are used to protect the privacy of the women who shared their stories, and parts of the quotes have been edited for clarity and in order to ensure that participant's identities remain anonymous.

Themes capture the perspectives of women's positive childbirth experiences and are grouped into two topics, which are then broken down into themes and subthemes. The first topic, labelled 'The inner world' relates to the thoughts, emotions and attitudes that were relevant to women's experiences of a positive childbirth experience. The theme '*Staying in the right mindset*' is positioned under the inner world topic, and consists of four subthemes. 'The outer world' relates to the environmental and social aspects of the birthing space, and is discussed in the two themes '*Comfort in the birth space*' and '*Connecting with the midwife*'. The structure of the main themes and subthemes can be seen in Figure 1.

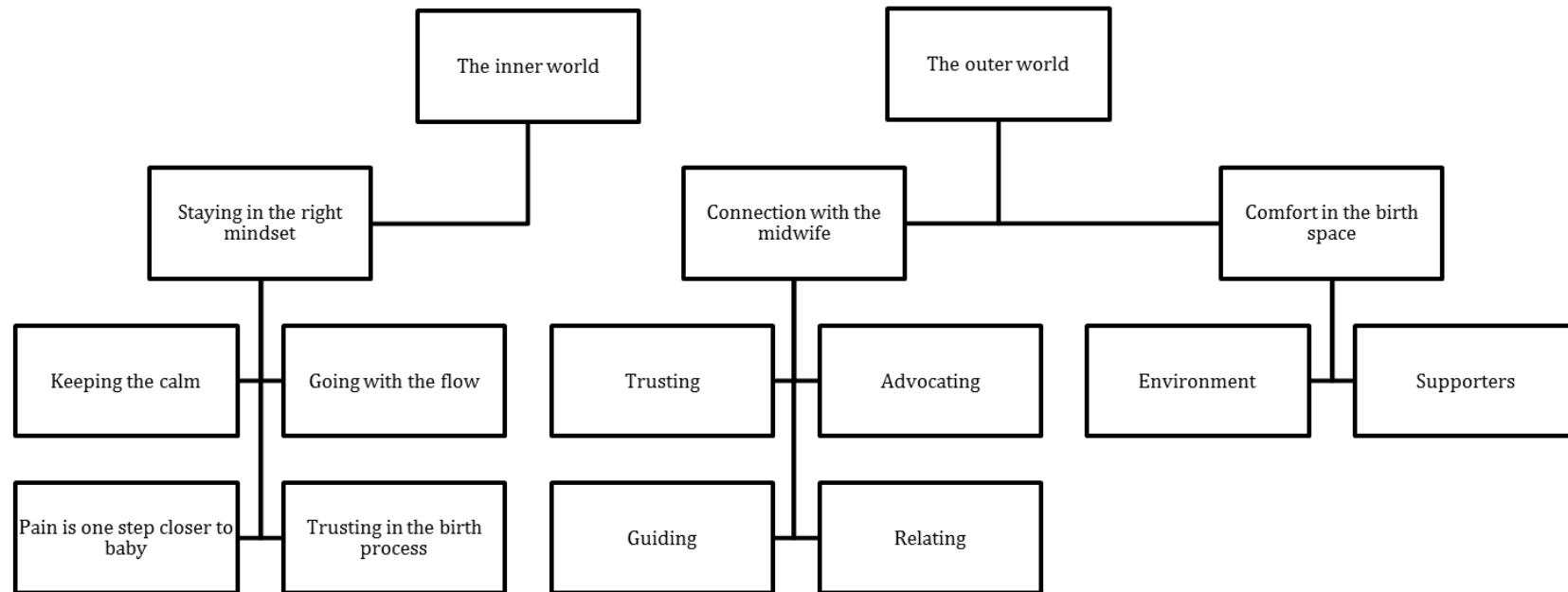


Figure 1. Overview of topic, themes and subthemes of positive childbirth narratives

Staying in the right mindset

Staying in the right mindset was an important aspect for each of the birthing woman in this study. What was considered to be the “right mindset” was different for each individual woman, but the narratives captured the effort that each woman took to ensure that they kept their mindset in the right place for them as their labour progressed. Amber, a multipara, stated:

I thought back to my first birth and I realised I hadn't embraced the birthing process and I wasn't calm, I was panicking and I was trying to physically trying to get away from the pain. I wasn't in the right mindset at all. Coming into this labour when the labour started, I was really trying to just keep my mind in the right place.

Amber reflected on aspects of her first child's birth, which was a negative experience for her, and she was able to identify the differences in her mindset between each experience. In her first birth, she described that she was not in the right mindset for birth because she did not accept the birth process or the pain, and she was unable to stay calm throughout the labour. Amber also reflected on some of the important factors that she believed helped her to keep calm during her birth. These factors were accepting the pain of contractions, embracing the birthing process and staying calm. Amber's story illustrates the importance that she placed on her mindset in her second birth, and this became evident across all of the women's narratives to varying degrees.

The concept of being able to stay in control was very important in the birth experience, each woman tried to maintain as much control over their birthing situation as their particular circumstances allowed. These women acknowledged that it was important to stay in control of their own mind. Staying in control of her

own mind was an important part of labour for Maia, especially given her experience of other people's negative birth experiences.

Maia: I had heard lots of not so nice experiences of other people with their labours and births. But I just thought that my mind is the most powerful thing I can be in control of. If I can control what I'm thinking, trust in the process and trust my body, then I know everything will be ok

Staying in the right mindset covers a number of processes that women went through in order to manage their own thoughts and emotions during the labour process. These are explained in more detail in each of the subthemes *Keeping the Calm*, *Going with the flow*, *Trusting in the birth process*, and *Accepting the pain*.

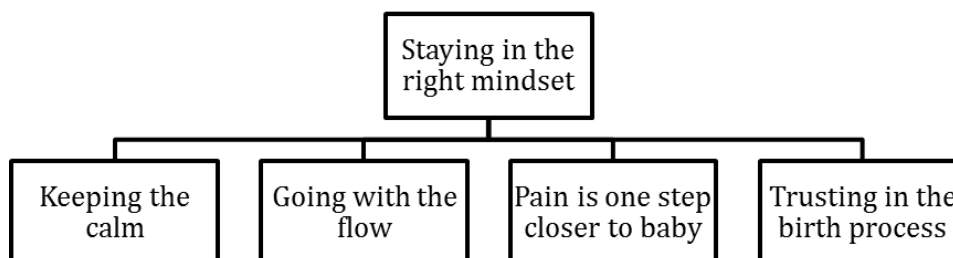


Figure 2. Overview of Staying in the right mindset theme and subthemes

Keeping the calm

‘Keeping the calm’ during the process of labour was one of the most important aspects for women. They explained that keeping calm was important for themselves, but also for their birthing space.

Amber: I tried to keep a calm mindset, calm everything, because my first -in comparison to my first labour which was awful, horrible, three days - 61 hours of labour. My midwife told me afterwards that I had drawn it out myself because of my mindset, how I was thinking.

Penelope reflected on the outcome of her birth as her experience was a calm one, and she made the connection between her birth experience and the effect of having a calm baby on her environment. She had made a conscious effort to make her experience as calm as possible, by birthing in a calming environment. The effect of the environment will be discussed in further detail later in the chapter.

Penelope: For me, the labour was super quick and really easy and pleasurable. And then she came out and she was perfect, nothing wrong with her, responding well and wasn't a crier. It was quite a calm sort of experience, because she was quite calm

Ashley commented that her ability to stay calm and relaxed during labour had an impact on her in the postnatal period, and has reflected in her parenting style and her baby's behaviour.

Ashley: I think even since having him, I've been really relaxed with everything. Everyone says 'he's such a good baby'. He is, but I've done nothing over the top or out of the ordinary to make him like that. If you're stressed and tense and freaking out, then they pick up on it and become a little bit the same.

Going with the flow

Going with the flow relates to women's ability to be prepared for changes or unexpected events during labour, and their ability to be flexible. Going with the flow reflects the attitude of women heading towards birth, where they knew that things don't often go as planned. Going with the flow allows a level of flexibility, and an acceptance of ambiguity in the labour process. Although women want to have some level of control over their choices and events that happen during labour, there is also an acceptance that events may not play out as they had hoped.

Ashley: I kind of naively thought oh yeah it will all go to plan, and then I was pregnant I thought oh wait you need to be prepared for both situations because it's out of your control and it could go either way

In the above quote, Ashley acknowledges that there are many factors that make up the birth process that she is unable to control, and she knows she has to be flexible in her approach to being in labour due to the fact that she is unable to control the events that will happen. Similarly, Penelope describes that she had prepared herself to expect that events of labour might not go as she had hoped. In this, she implies that she would be accepting of events if something happened beyond her control, and was able to respond accordingly in the situation. In this setting, she could be accepting that she does not have control in the birthing situation, which means that she has to remain flexible.

Penelope: I was hoping for the best, but I had mentally prepared that if it didn't go a really awesome way that that would be ok and I'd just roll with it, you know what I mean?

The function of flexibility was also important in regards to women's plans and aspirations for their birth. Kate described a level of acceptance that she didn't have control over the birthing process and thus wanted to manage her own expectations of what would happen in labour.

Kate: I didn't want a birth plan specifically, because I knew for myself that if I planned something and it didn't happen, I would be really disappointed. So, everything I had planned was loosely based

The idea of staying flexible appears to be important in Kate's story, as she acknowledges that she was a person that liked to be organised and plan her life out, but she knew that that particular approach would only lead to disappointment if she was to apply that to the birth process. Therefore, by Kate remaining flexible in her approach to birth and having a guide (rather than a rigid plan) for her labour, she was able to avoid disappointment with the process.

Amber: I thought that I wanted a water birth but I changed my mind, so I mean that was my expectation during pregnancy but that changed but that's fine though

In the above quote, Amber reflects on her wishes for birth during her pregnancy, and how they changed when she got to her labour. This quote acknowledges her acceptance of how things can change in labour, including her own wishes and she was not set in her ideal way of birthing. Amber was able to be responsive to her own wishes in the moment, rather than becoming upset because

things didn't turn out how she wanted them to originally. This was also reflected in Maia's story.

Maia: I'm open to other things because you don't know how it's going to go

This quote from Maia summarises the flexible attitude in labour, she was open to other approaches and acknowledges that she was unable to predict how labour will go, and therefore remains flexible in how she approached labour.

Pain is one step closer to baby

In each woman's story, she described the way that she coped with the pain of contractions during labour. None of the women explicitly related their experience or management of pain to their overall positive birth experience. However, their ability to manage the pain of contractions demonstrated their ability to stay in control of their own minds, which did influence their births positively.

Some women acknowledged that they did not particularly enjoy the sensations of contractions. However, these women had framed the pain of contractions as positive, that they were able to accept the pain because that meant they were further along in the labour process.

Amber: Getting through them and knowing that each one that I got through was another step closer to the baby, and the pain was a good thing. You know, the pain is going to get worse but it's for a good cause. It's not a pain like you've been hurt – it's not a negative pain, it's a positive pain. It's your body doing what it's supposed to do

Reframing the sensation of pain as a positive feeling rather than a negative one was an important aspect for Amber. Amber talked about the thoughts she had

about getting through contractions and the meaning of pain. Kate had a similar experience, and drew on knowledge from social media to help manage contractions.

Kate: I read an Instagrammer's blog and one of the things she had said that stuck with me that she had read and done with hypnobirthing was that each contraction you're a step closer. So, with every contraction that's done, once that's over you're never going to have that one again and you're one step closer. That was always in the back of my mind

Meanwhile, Penelope was able to use mindfulness to reframe sensations from contractions as a positive experience rather than a negative one.

Penelope: I used mindfulness, so like really trying to be in my body and be in that experience and not judge it. Not like 'it's so painful, it's so awful' – no no. This is it. It is what it is and just feel everything and do your breathing. Don't try to think about it too much or analyse it. That helped as well.

The experience of pain appeared to be an opportunity to exert some form of control for some women. This was the case for Maia, who discussed taking gas as pain relief during her labour and the effect that it had on her ability to control her own body.

Maia: I didn't feel like myself. Then I was without it [gas], I felt in total control. I knew what to do, I could control when I pushed. I knew what I was feeling, but with the laughing gas I couldn't feel things the same. That could be a good thing, but for me I don't think it would've worked as well because I didn't have that control and that was what I really needed

Maia was aware that she needed to feel in control of her own body to manage the experience of contractions during labour, and in altering her ability to control her body by using the gas, she felt as though she had less control which she did not like. Maia further reflected on the meaning of pain for her as a positive feeling, and the sensation of what that meant.

Maia: I liked the feeling of the pain that I felt pushing. It felt good to push. It felt like a good pain

All of the women talked about the process in which they overcame the pain of contractions. This process varied for each woman. Overall, all of the women described a form of acceptance towards the reality of contractions being a painful or intense experience.

In telling her story, Laura used positive language when describing contractions and events in birth, deliberately avoiding using the words 'pain' and 'sore' and other words with negative connotations. This notion of describing pain in non-pain terms appeared to assist women in the ability to accept the sensations of contractions. Although Laura did not explicitly comment on her using non-pain language to portray positive emotions towards pain, it is consistent with her wishes to avoid negativity and focus on positive thoughts during pregnancy and labour.

Laura: For me, it was more like riding out the wave of it. The few, maybe five contractions, that were intense. I think I went up on my tiptoes and let it go through my body, and then it would pass

However, Maia explicitly chose to use non-pain terms to describe the sensations of contractions. Maia was specific with the way that she described the

sensation of the pain, and preferred to refer to contractions in positive language.

This was a conscious decision.

Maia: I don't think it was completely unbearable, and I don't like to think of it as pain so much as intensity. It wasn't so intense that I thought I was going to die or anything. It wasn't like that at all. For me, the only part that wasn't nice is the crowning part when the head comes out. That's not nice. But everything else was completely fine

Trusting in the birth process

Women's ability to trust in the birth process was important for them to stay in the right mindset. The trust in the birth process extends from just the physiological aspect of labour, to the physical environment and to the people present. Women in this study described two pathways for develop trust in the birthing process. Their narratives followed either an evidence-based route, or encompassed knowledge of a holistic approach.

Some women's stories reflected a need to research and find out as much information as possible that was relevant to the labour and birth, which included all of the decisions that were able to be made. The preparation they described helped these women to feel more prepared and able to face the challenges of labour, and to help them stay in the right mindset for birth. This type of preparation was helpful for some women, as it allowed them to reduce their anxious feelings in regards to birth. Amber and Penelope both described that it was this preparation that contributed to their positive birth experiences.

Amber: In my opinion, it would be the preparation - knowing what to expect and doing the research on things to help me in labour. I knew the process, I knew what was going to happen, so I wasn't anxious about what the process was going to be like, what's going to happen, how's it going to feel, how am I going to react to this.

Penelope further described how preparing for birth by researching helped to alleviate anxiety about the birth.

Penelope: For me, my anxiety is lessened by researching things and making sure I'm prepared and knowing what I'm in for. Online, as well as going to wherever I'm going to give birth. Visually seeing it and going over it in my head and focusing on that.

While some women approached birth by researching of the possibilities available, other women had a holistic attitude to birth which allowed them to trust in the birthing process. These women appeared to have a holistic approach to birth, in terms of having an attitude that the body will do what it needs to do, and had a faith in their own bodies that they would do what nature intended. Laura reflected that trust in the birth process was a big part of the reason why she thought that her experience was a positive one.

Laura: Trusting myself. Trusting my support people. Trusting my baby. Having faith that the way the body is designed, its designed to carry and birth children. That's what it's there for. For a fit, healthy, [pause] not young but old -average age-, it could do it

Laura also commented on the fact that birth is a natural process and emphasised bodily autonomy, the sense that the body will do what it needs to do in order to give birth.

Laura: Birth is natural process that's been going on forever. We're not the only species that do it. It's like, why do animals birth in the still of the night when there's no one else around? It's quiet and calm and cool. Their bodies know

Comfort in the birth space

Laura: Hygge¹ - the feeling you get when you're around people, but at the same time for me, it was in my mind how I wanted my birth to be, it was that same kind of happy feelings. If someone said 'describe your perfect winter night' or 'describe your perfect birth'

The birthing space plays an important part in a woman's experience of labour. Most women wanted to labour in an environment that was comfortable to them, in order for them to be able to relax and focus on contractions. Being in a familiar or comfortable environment was good for women during birth because it helped them to relax, and being in a relaxed state was helpful for labour progression. A comfortable birth space considered the physical environment, the people present and the emotional environment and how those aspects contributed to a feeling of comfort.

¹ Hygge, a Danish word defined as a quality of cosiness and comfortable conviviality that engenders a feeling of contentment or well-being. Hygge is regarded as a defining characteristic of Danish culture.

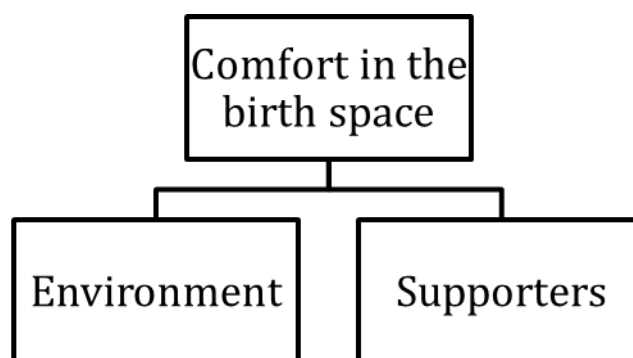


Figure 3. Comfort in the birth space theme and subthemes

Environment

Laura: I liken it to like when you try and poo somewhere when someone is standing outside, or in a public place. You just can't do it, it's like stage fright! But if you're relaxed in your own environment, you don't worry about it, it's sweet.

In New Zealand, women are able to choose where to give birth; at hospital, at a birthing centre or at home. Participants in the study discussed how being able to give birth in the location that they chose, meant that they were able to be comfortable. The decision to give birth in a certain location appeared to be related to whether they felt comfortable there. Kate reflected that home was the most comfortable place for her to be, so wanted to be there for as much of her labour as possible. She planned to give birth at the birthing centre, which was another place she felt comfortable.

Kate: I wanted to labour as much as I could at home, because that's an environment that I felt comfortable in... Went to the birth centre, got all our bags out, parked the car. I felt really good, that's where I wanted to be, that's where I wanted to give birth. I loved the rooms because they were so clean

Ashley gave birth at the birthing centre, as she was able to relax in that environment. In contrast, she did not think she would be able to stay in a relaxed state if she had to birth at the hospital.

Ashley: I think if I had gone to hospital, I probably would've reacted worse. I don't even like going there to visit other people. But for me, the birthing centre had no association with hospital at all. It was alright for me and I relaxed there

Penelope chose to give birth at the birthing centre because of the level of comfort there, and also connected the idea of being comfortable with being happy.

Penelope: The rooms were huge, loved the birthing rooms, loved the dedicated birthing pool in the room. It was so nice there, and when you're comfortable, you're happier

Being able to manipulate the physical birthing environment was what participants were able to do during labour, which helped to contribute to feelings of comfort, but also allowed freedom and autonomy in labour. This was evident in the ways that women set up their birthing environment. This manipulation of the physical space provided a sense of accomplishment in a time of uncertainty and pressure. One of the most common ways that women were able to manipulate the birthing environment was the ability to play music during their labour. This was particularly useful when women were away from home, and was a quick and easy way for them to make the environment more comfortable.

Maia: I really wanted music, relaxing music to make it more of a comfortable environment

This excerpt from Kate speaks to why the environment is important in the birth experience, and how objectively small things can have a big impact. For

Kate, the small act of playing a movie during her labour was able to give her a feeling of accomplishment.

Kate: I had a labour plan- what I wanted was to watch a movie, and to have candles and dim lights. For me, that was something that I could control so that's why we did it. It's the one thing I suggest to other people having babies: Don't plan for a particular type of birth because it's never ever going to be perfect, but if you can do something that's achievable during your labour, you feel so good about it. That definitely helped, it took my mind off the pain and yeah, it was a nice environment to be in

Supporters

Women in this study spoke about the people that they had present at the birth. This represented another area where they were able to gain control, by giving permission for others to be there. This allowed women to manipulate the environment for their own comfort. For some, they preferred to have as few people as possible present, which was evident for Maia.

Maia: I wanted as less people as possible. Because I didn't know what to expect, I felt more comfortable with just my husband and my midwife.

For Kate, having people present was an important aspect of her birth experience, and contributed to a comfortable birthing space for her.

Kate: It was cool having my mum there. It was cool having my husband there too. I guess even though I was so quiet the whole time, it was nice because they would joke with me. It was the people that surrounded me that made it.

On reflecting on her experience, Ashley realised that her support people were wanting to be there to help her through, even though she wasn't aware of that at the time.

Ashley: I remember everyone was out with the baby, and only my midwife was with me. I didn't even realise at the time, I remember my partner's mum came to me. She probably realised 'Shit, Ashley is still in there trying to do these hard yards and no one is with her', and she thought to come be with me. I had no idea, but now that I look back it was really nice of her

Connection with the Midwife

Many of the women in the study considered their relationship with their midwife as one of the key reasons why their birth experience was a positive one. In particular, there were four qualities identified that the women described as contributing to their connection to their midwife and their overall experience of birth. These four qualities were trusting, guiding, advocating and relating as outlined in Figure 4 below.

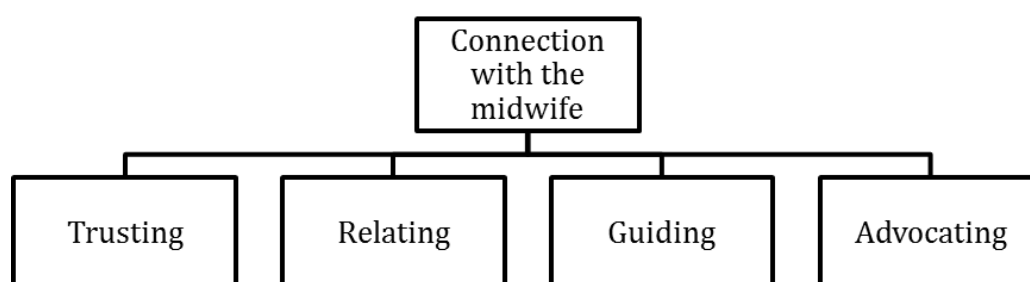


Figure 4. Connection with the midwife theme and subthemes.

Trusting

The women emphasised the importance of a trusting relationship with the midwife, as this enhanced their ability and capacity to cope with the demands of labour. When Maia looked back at what contributed to a positive childbirth experience, trusting her midwife was an important factor for her.

Maia: I trusted my midwife. I just feel like there was nothing to be afraid of.

Amber commented that the relationship with her midwife, specifically because of the level of trust that she had in her midwife, was particularly relevant for decision making during labour.

Amber: The midwife really helped, having that relationship with her. I trusted her more, like advice she gave me during labour or things she said, I didn't double think it. I was like 'I trust your opinion', I'll just go with that.

These narratives further illustrate that the midwife's knowledge and expertise is vital and is relied on in challenging times. All of the women in this study relied on the skills and expertise of their midwife, and had faith that they were able to make decisions accurately with their best interests at heart. For Penelope, it was her midwife's other life experiences that helped her to develop trust.

Penelope: I wanted someone with a bit more life experience. I looked the midwife up and she was fine. She wasn't a one trick pony, she had other experiences in life and careers and everything, so I could trust that

This trust in the relationship was evident for Kate, who experienced complications during her labour and was well supported by her midwife.

Kate: I hated the labour, but the birth was really cool because I was going to get baby out, and I just guess it was my determination to get him out, and the fact that I really trusted my midwife

Relating

At the onset of pregnancy, women engaged with a midwife to look after them during their pregnancy. One of the qualities that most of the women in this study specifically looked for in a midwife was the feeling that the midwife could relate to the woman. For these women, the factor of relating came from midwife's ability to connect with another person on a personal level. The factor of relatability links in with the concept of trust, as evident in this quote from Amber.

Amber: I really wanted to make sure this time round that I had a midwife that I could relate a bit better to, that would listen if I told her how anxious I was

The concept of relating to the midwife was evident during pregnancy for Laura. Laura illustrates the concept of relating with her midwife, which appeared to happen as a natural process of their relationship.

Laura: When I would go for my check-ups during my pregnancy, she would just do a measurement of my belly with the tape measure and just have a feel for where baby was sitting. That was about as non-invasive as you want it to be. Basically, the other hour and a half we were just talking about stuff. Families. Life. That relationship was established right from the go.

Meanwhile, Ashley was able to relate to her midwife through the use of humour, both in her antenatal visits and during her labour.

Ashley: I have a really awesome relationship with her, we always joke and whatnot. She was quite positive and bubbly. She did her job and she knew what job she had to do, everything was done by the book. But it wasn't strict, you were able to have a joke and laugh with her which was huge

Guiding

Maia: My midwife was good, I would feel contractions but she directed me a bit more with 'ok you might need to start pushing now', that sort of thing. It gave me a bit more direction and I really liked that because I didn't know what to expect, so that helped a lot.

Women in birth were guided by their midwife and this was particularly salient for first time mothers, as quite often the birthing women were uncertain about how labour would progress. In the quote above, Maia reflected on the experience of her first child's birth and how she found the guidance of her midwife helpful in the later stage of labour. The midwife is the birth expert, and guidance relates to the subtheme of trusting, as women are likely to be guided by someone that they trust in.

Ashley: It wasn't until my midwife said to me 'Look. You need to focus on that pain and you need to push where it hurts'. I was like 'Oh! Ok!'. I was just stopping. I was really confused while I was having a contraction, should I be breathing through it or should I be pushing? I didn't know what to do

The above quote from Ashley, a first-time mother, illustrates the role that midwives have in assisting women in birth and guiding them through new and

often challenging situations. For Ashley, having the midwife to guide her through the labour journey was important for her so she knew what to do.

Navigating through pregnancy and labour can be a challenging time. For some, having the midwife present is a way in which the women can feel more informed about birth. It was more evident that the guidance made a significant difference to women during the challenging parts of labour. For first time mothers, this guidance was particularly important. Kate, a first-time mother reflected on the knowledge that her midwife shared about the physiological process of labour, and how that guided her through the rest of her labour.

Kate: She explained that it wasn't surprising that my labour wasn't progressing because of the change in my midwife. She said, you've just let a stranger essentially into your home. She said it's primal for your body to do that. Because she explained it to me, it made me relax a bit with what was going on.

When complications arose during labour for Kate, the guidance from her midwife was vital, as the midwife was able to guide Kate through her exhaustion and assist her in making decisions that would allow her to continue through the labour, despite the decisions going against Kate's pre-pregnancy aspirations. The following quote explores both trust and guidance from the midwife, and a 'going with the flow' approach.

Kate: My midwife said to me then, you need an epidural. You are so exhausted. You're not going to physically be able to push this baby out if you don't have one. She's like, look just have the epidural, have a sleep. She's very logical, which is what I needed at the time. So, I totally was like ok, which is something I was so anti before I was pregnant. I didn't want an epidural, I didn't want any drugs, I just wanted to do it. But I was so physically

exhausted, I knew that I needed something else. I just needed sleep.

Advocacy

One of the strengths of the relationship between woman and midwife is the sense of advocacy that the midwife would fight to protect the rights of the women that they have in their care. For some women, this was an important factor that was considered before even engaging with a midwife. The ability for a midwife to advocate for the best outcomes for women was a factor that was important for those women who had previously given birth and were aware that sometimes the events during birth are not within their own control. Penelope sought this quality specifically when she looked at engaging a midwife.

Penelope: I wanted someone with a bit more life experience who I could relinquish control over to at the later stages of the birth, and that I could trust. That could speak up to the doctors if I was in the hospital. If they were younger, then I wanted someone who was confident and assertive

One participant described their experience of their midwife advocating for them after being transferred to the hospital in order to receive an epidural. The role of the midwife as advocate appears to be an important factor in Kate's experience, where she was in unfamiliar territory and where the circumstances were beyond her control. Kate was told by hospital midwives that she was unable to have an epidural, despite only going to the hospital for medical intervention after her labour progression stalled.

Kate: There was no care, there was no love, it was just 'we've got no staff' from the hospital team. My midwife fought and fought and fought and was like, well she needs something, what about

this and what about that? She eventually managed to persuade them to give me fentanyl, and it was amazing

Kate's reflection shows the dedication and the strength that her midwife demonstrated to stand up to hospital staff in order for Kate to receive the care that she needed.

Chapter Five: Discussion

The objectives of this study included, firstly, to test whether specific factors found in prior research were associated with birth experiences for New Zealand women. The second objective was to explore the birth narratives of New Zealand women who experienced a positive birth in order to reveal relevant themes. New Zealand has a diverse population with unique cultural influences and a maternity care system primarily led by midwives. Few studies have been completed that specifically explore the birth experiences of New Zealand women, which further adds value for undertaking this research. This section will discuss the findings from this study, and the meaning that these findings have these for women, and for other childbearing women. The main concepts of perceived control, midwife relationship, the birthing space and birth events are explored from both quantitative and qualitative approaches, and then synthesised. Finally, recommendations for future research, limitations of the research and implications for practice and policymakers will be presented.

Perceived control and the ‘right mindset for birth’

The association between perceived control and the birth experience was the strongest finding from this study, supporting the study hypothesis. The strength of this finding was reflected in both methods of inquiry. Within the survey data, the correlation between both measures of the birth experience and control was very strong. In addition, the birth narratives revealed one theme and four subthemes that provided insight into what control looked like to birthing women, and how women were able to maintain a sense of control within their own birthing experiences.

Narratives of women's birth experiences described the importance of the "right mindset" for birth, and how the right mindset helps maintain calm both in the birthing space and within themselves. It appears that the "right mindset" is a way that women in this study were able to conceptualise control and demonstrate how they were able to gain and maintain control within their own birth context. Being able to stay in the right mindset took mental effort, and women felt that having the "wrong mindset" would lead to panic, a sense of being overwhelmed and an inability to cope with the events of labour.

Trusting in the process of birth was a theme that emerged from birth narratives that described how mothers were able to stay in the right mindset. For mothers that described trust in the process by researching of all the possible choices they could make during labour, it led to them feeling more in control of their birth context. For some women, the knowledge of all available choices in regards to their birth helped them gain a sense of control over their birth experience. Meanwhile for some mothers, the belief that the process of birth is a natural one and women's bodies are made to give birth allowed them to trust in the process and gave them confidence in their own ability to give birth. These two ways of trusting in the birth process may represent two different aspects of perceived control; One where a perception of control is maintained through knowledge of all possible choices in birth, and the other where women cede control to a natural process.

The theme of going with the flow encompassed the idea of being prepared for changes or unexpected events in labour. Flexibility contributed to the right mindset, as women in the study explained that that they accepted a certain level of ambiguity in the birth process. By adopting a 'going with the flow' attitude,

mothers accept that they are not in control of many aspects of their labour. By accepting that labour and birth is an uncontrollable event, these women make sure they mentally prepare themselves for situations where unforeseen complications might occur. This act of mental preparation enables women to still perceive control in their birth experience.

This study adds to the extensive range of literature that supports perceived control as being a major factor in predicting a positive birth experience. Previous studies have found that high levels of perceived control have been associated with positive birth experiences (Ayers & Pickering, 2005; Green & Baston, 2003; Hildingsson et al., 2013). Women's perceptions of their involvement in their own birth was found to be associated with positive childbirth experiences (Waldenstrom, 1999), which was reflected in the current study's narrative findings. Personal control was a statistically significant predictor of birth satisfaction (Goodman, Mackey, & Tavakoli, 2003), mirroring the correlation identified in the survey study. Self-efficacy was found to predict birth satisfaction in primiparous women (Berentson - Shaw et al., 2009), which was evident in the birth narratives of women in the current study. Meanwhile, a study in Iran found that self-control was correlated with childbirth satisfaction (Jafari et al., 2017).

Although there are a large number of studies that can confirm the importance of perceived control in the birthing experience, each one conceptualises perceived control differently. The current study findings indicate that the meaning of control for women birthing in New Zealand may be slightly different from the models proposed by American studies (Green & Baston, 2003; Namey & Lyerly, 2010). While control over own behaviour and control during contractions emerged as themes in the current study consistent with Green and

Baston's definition of control, a theme that encompassed the sentiment of having control over professionals was not. This finding could be due to the differences in the systems of maternity care in America and New Zealand.

The meaning of control for women according to birth narratives in the current study is partly captured by the five concepts of control, self-determination, respect, personal security, attachment and knowledge, proposed by Namey and Lyerly (2010). Although four of the concepts appeared to fit the experiences of women in the current study, there appeared to be a difference in how the concept of respect related to birthing experiences. Namey and Lyerly (2010) defined respect as a woman's sense of being able to maintain control of behaviours (e.g. screaming, grunting) that they felt might compromise their sense of dignity later on. Although women in the current study discussed control over their own behaviour, there was no discussion of censorship over their body's responses to contractions during labour. Women in the current study stated they were comfortable with grunting or making noises during labour, as those behaviours supported their own physical sensations and emotions during the birth. Some women expressed thoughts they had in pregnancy where they hoped not to engage in the suggested behaviours during labour and on reflection stated that they no longer cared while they were in labour. It is possible that because women in the study generally had positive relationships with the people present during labour and they were birthing in a comfortable environment, that they were more comfortable to engage in behaviours they would not otherwise do. Another idea is that societal differences between America and New Zealand women contribute to a difference in definitions of respect. In regards to control, there appear to be differences between women's attitudes about allowing their own bodies to

respond to labour autonomously, as opposed to making a conscious effort to control their body. In contrast, there is an ideology in the United States that views pregnancy and childbirth as periods which women lack control over their bodies, and the childbearing body is constructed as uncontrollable, uncontained and wayward (Carter, 2010). Methodological differences in the study could contribute to a different definition of respect, as Namey and Lyerly's study also included less positive birth experiences, meaning their definition of respect did not apply to the birth experiences of the women in the current study.

Partnership and power in the birthing woman-midwife relationship

In contrast to Green and Baston's findings, women in this study did not describe trying to control professionals within their birth narratives. Differences in the maternity care system could possibly explain why these differences exist. New Zealand employs a midwifery-led model of maternity care, compared with an obstetrician-led model in the United States. Midwifery-led care encourages the formation of a partnership between birthing woman and midwife, allowing the birthing women freedom in their birth decisions (New Zealand Midwifery Council, 2010). Therefore, birthing women may not feel the need to exert control over professionals. If the birthing mother and their midwife have a relationship based on trust, then there would be no need for the birthing mother to exert control over the midwife. In comparison, within non-midwifery led models of care, the same level of autonomy may not exist within the birthing woman and their relationship with maternity professionals.

Controlling the mind means not being overwhelmed with pain

The level of pain and appraisal of the birth experience were not significantly correlated in the current study. This finding is contrary to the study hypothesis, and to expectations based on prior literature (Karlsdottir, Sveinsdottir, Kristjansdottir, Aspelund, & Olafsdottir, 2017; Storksen, Garthus-Niegel, Vangen, & Eberhard-Gran, 2013; Waldenström et al., 2004). Birth narratives demonstrated that the ability to stay in the right mindset contributed to a positive birth experience, particularly in regards to managing the pain from contractions. Many factors appear to influence the relationship between pain and the ability to manage pain during labour, many of which have been explored in the literature. Literature suggests a complicated relationship between pain, pain management and the birth experience, reflected in mixed findings in the literature. Pain and pain relief generally do not play major roles in satisfaction with the childbirth experience unless expectations regarding either are unmet (Hodnett, 2002). Pain was not found to be a significant predictor of women's perceptions of their childbirth experience (Bryanton et al., 2008; Fenaroli, Saita, Molgora, & Accordini, 2016). Others have suggested that if women can sustain beliefs that pain is purposeful, productive and the environment that she is birthing in is safe and supportive, the pain would be experienced as non-threatening (Whitburn et al., 2018), which was consistent with the narrative findings, in particular Amber's comment that "pain is going to get worse, but it's for a good cause. It's your body doing what it's supposed to do".

In contrast, pain in labour has sometimes been associated with a negative birth experience (Waldenström et al., 2004), and women who felt much pain during childbirth were more likely to suffer from postpartum post-traumatic stress

disorder than those who experienced less pain or had a positive childbirth experience (Storksen et al., 2013). Perception of pain has been found to be one of the strongest predictors of the overall childbirth experience (Karlsdottir et al., 2017). Sample size for the current study may have reduced the likelihood of identifying a relationship between these factors, especially since the number of women that experienced a negative birth experience within this study was low (35%, N = 19).

Birth narratives provide context into why there was no association between pain and the birth experience in the current study. When women were able to stay in the right mindset during contractions, meaning that they were able to control their thoughts during contractions and remain calm despite their pain, they perceived greater control. The pain was still present and observed, but utilising a number of cognitive techniques may have allowed the women to maintain the right mindset for birth during this time, thus maintaining a perception of control. One of these techniques was restructuring of labour pain as a positive sensation, rather than a negative one.

Characteristics of the women that took part in the study may be a contributing factor to finding no association between pain and the birth experience, women in the study were recruited from a voluntary pilot study for a smartphone app to manage psychological changes and stress during pregnancy. Women who took part in the current study may have been actively working on maintaining their mental wellbeing during their pregnancy and were explicitly provided with tools for managing negative thoughts and emotions. Survey data from the study provides evidence for this, as measures of distress for the group were significantly lower than a comparison group of pregnant New Zealand

women. The women also had higher levels of education, which may have influenced their choices in seeking out further information about managing stress, further increasing the attractiveness of participating in the pilot study. Therefore, it is possible that women in this study may have had more skills and tools to develop the ‘the right mindset’, mitigating the association between pain and quality of birth experience.

Connection with the midwife

A moderate and significant correlation was observed between professional support during labour and the birth experience, which supports the study hypothesis. Birth narratives revealed the importance of the relationship between birthing mother and their midwife, and how this relationship contributed to their positive birth experience. The helpful aspects of the relationship were discussed according to the four themes of trusting, guiding, relating and advocating. Birthing mothers emphasised that the relationship with their midwife was important for them, and the midwife’s presence was important in creating a safe and supportive birthing environment.

Mutual trust in the relationship

One important concept that underlies the relationship between birthing mother and midwife is trust. A trusting relationship meant that birthing women had less worry about their labour because they knew that their midwife would act with her choices and birth preferences as primary considerations, alongside the safety of both mother and baby. Birthing women in the interview study described that they trusted in the expertise of their midwife and valuing their knowledge and profession, and this helped women to build confidence in their ability to give

birth, which was previously been identified by Walker et al. (1995). The development of trust appears to be an important factor that has been outlined in previous literature (Berg, Lundgren, Hermansson, & Wahlberg, 1996). Leap et al. (2010) supports the concept of trust being an important factor in the relationship between woman and midwife, particularly for the emotional aspects relating to the childbirth. For women that have had previous negative birth experiences, they were better prepared for birth in instances where there was a trusting relationship between themselves and the midwife (Lyberg & Severinsson, 2010).

Being guided by the midwife

Birth narratives described the role that midwives had guiding women through the birth process during labour, this was also been found in a previous study (Berg et al., 1996). However, there were differences in the narratives of first-time mothers and the involvement that the midwife had in their labour. While the midwife had a central role in the birth narratives of first-time mothers, there was less emphasis on this aspect in the narratives of mothers who had given birth before. Although there were only two first time mothers in the narrative study and this was not explored in the survey data, these findings indicate that guidance was a stronger factor for first time mothers.

This finding could be due to the fact that birth was a new experience, and often first-time mothers expressed sentiments that they did not know what to expect during labour and questioned whether what they were feeling was normal. The midwife's role of guiding women through the labour and birth process, and informing women of their choices during the process was more prevalent for first-time mothers. This guidance was in the form of helping women cope with the

contractions, interacting and encouraging the support people present and managing the relationships between other professionals. Meanwhile for multipara women, it could be theorised that because they had experienced birth before, much of the uncertainty of the sensations of contractions and what their body was capable of doing in response would be reduced. For some multiparas in the study, their labour progressed so quickly that the midwife was not even present at the birth.

Midwife as advocate

For women who experienced complications or anticipated complications during labour, it was important that they were confident in their midwife's ability to advocate for them, especially if they were to have other professionals involved in their care. Advocacy was observed in one woman's birth narrative where she was transferred to the hospital from the birth centre, and she was unable to receive an epidural. The midwife's advocacy meant that the birthing mother was able to receive the pain relief she needed. Essentially, the role of the advocate is to make sure women's voices are heard when they are unable to do so themselves. An advocating midwife may make a significant difference to the birth experience for women with complications in labour. Although there was only one mother's narrative that involved labour complications and transfer to hospital, literature supports the midwife's presence throughout the transfer process that helped build resilience to cope with changes and medical intervention (Sosa, Crozier, & Stockl, 2018). Therefore, there is an opportunity for further inquiry as to the relationship between midwifery support, labour complications and birth experience. The current study supports other studies that emphasise the importance of a midwife

that would advocate for them if medical intervention was required (Howarth et al., 2011).

Personal connection with midwife

The ability to connect with the midwife was important, and narratives expressed that mothers wanted a midwife they could relate to, and confirms findings from previous studies (Bradfield, Hauck, Kelly, & Duggan, 2019). Women were looking for a way of personally connecting to the midwife, further helping the establishment of trust within the relationship. Some research has gone on to consider what qualities are important in a midwife, and how that impacts on the relationship with women. Consistent with findings in this study, another New Zealand study found participants looked for a close and personal relationship with their midwives in which they felt comfortable with each other (Howarth et al., 2011), which supports the importance of relating as an important aspect of the birthing woman and midwife relationship. In one Finnish study, the most important predictors for the nature of childbirth experiences were the characteristics of the midwife such as empathy, friendliness, tenderness, calmness and lack of hurry (Tarkka & Paunonen, 2000), all of which are characteristics that would assist in the development of a personal connection.

The current findings are consistent with a number of empirical studies that conclude that professional support is an important factor in women's experience of birth (Backstrom, Martensson, Golsater, & Thorstensson, 2016; Dahlberg & Aune, 2013). The quality of the relationship between birthing woman and midwife was found to be an important factor in the birth experience (Dahlberg & Aune, 2013). Women who experienced continuous support during childbirth were

less likely to report dissatisfaction with their childbirth experience (Hodnett, Gates, Hofmeyr, & Sakala, 2005). Support from staff during birth was found to have more influence on women's anxiety and mood levels than the actual events of birth (Ford & Ayers, 2009).

New Zealand's system of maternity care is likely to be a significant factor in facilitating the relationship between woman and midwife. Continuity of care is an important feature of the maternity care system, as women are able to engage with a midwife at the beginning of the pregnancy, and will see the same midwife throughout their pregnancy, labour and then for six weeks of postnatal care. The current study endorses continuity of care as important in supporting women across the span of their pregnancy and into the first few weeks of baby's life. Research suggests that continuity of care is typically a component of high-quality antenatal and intrapartum care (Dahlberg & Aune, 2013). Continuity of care can make women feel prepared for birth, more confident and more likely to experience a positive birth (Sandall, Devane, Soltani, Hatem, & Gates, 2010). Within the current study, the nature of the relationship between mother and midwife, particularly the aspects of trust and relatability, support this finding.

A comfortable birthing space

Birth narratives explored the ways that the birthing space contributed to a positive birth experience. In the survey data there was a significant relationship between birth location and birth experience. Statistical tests revealed a strong and significant correlation between feelings of security that a woman felt in labour with their overall birth experience. Overall, a comfortable and safe birth environment was associated with positive birth experiences. However, each

woman had their own idea of how to customise their birth space for it to be a more comfortable environment for them. The ability to perceive control over choices for their birthing space contributed to feelings of comfort and safety. Themes relating to the birthing space incorporate birth location, the sense of comfort or 'hygge', midwife presence and the physical environment.

Comfortable birth, hygge birth

Strong themes of a comfortable birthing space appeared throughout birth narratives and contributed to positive birth experiences for birthing mothers. The choices that women were able to make in regards to their birth space contributed to their perception of control during labour. Narratives revealed that small choices helped birthing mothers to perceive control over their birth space. For example, being able to play certain music during labour, lighting candles or having meaningful people present at the birth.

One woman's birth narrative explained the Danish concept of 'hygge' (*hoo-geh*) and was how she described her birth. The word Hygge has been defined as a pleasant, attentive and relaxed mode of 'togetherness' (Levisen, 2012). The literal translation of the word to English is 'pleasant-togetherness' (Levisen, 2012), and has a meaning of warmth, comfort and cosiness in both a physical and psychological way, and this related to the feelings of comfort that most mothers described in their birth narratives.

The current study supports the importance of a safe, secure and comfortable environment for birth which has also been identified within the literature. Aune et al. (2015) identified that the environment extended beyond purely physical concept, and found that stable life circumstances were important

in promoting a positive birth experience. A recent study found that a safe and supportive environment was helpful for the birth experience by assisting with the interpretation of labour pain as a non-threatening transformative life event (Whitburn et al., 2018). Birth territory theory, proposed by Fahy and Parratt (2006), assumes that the less familiar the environment is to a birthing mother, the more likely she is to feel fear and uncertainty. Birth territory theory defines concepts specific to the birth context. Features of the birthing space is referred to as 'terrain' and the 'jurisdiction' refers to the power, both of the woman present and the midwife. The idea of the 'sanctum' is proposed as a birthing space that is a homely environment, which enhances the woman's sense of self and emotional wellbeing, while the 'surveillance room' describes a clinical environment which is designed to facilitate ease and comfort of staff, and the theory proposes that if a birth room deviates too much from a 'sanctum', it may result in reduced physiological functioning, reduced emotional wellbeing and possible emotional distress (Fahy & Parratt, 2006). While the majority of birth narratives describe their environment as comfortable and homely, only one mother birthed in a 'surveillance room' environment. However, the number of mothers who birthed at hospital and experienced birth in less positively based on survey data findings, may indicate the relevance of birth territory theory. However, this result should be interpreted with caution, as hospital births are often confounded with complications and high-risk births.

Choice of birth location

There was a significant difference in the birth experiences that occurred in hospital compared with the birth centre and home birth. Women were more likely

to have a less positive birth experience if they gave birth in hospital. Women who gave birth in the birth centre were more likely to have a positive birth experience.

There are many factors to consider when looking at where to give birth, and these depend on safety and risk factors for mother and baby in pregnancy, preferred method of pain relief during labour and whether complications require specialist intervention. Women with high risk births are encouraged to birth in hospital, where they are able to access obstetric specialists if required. The choice of birth location may also depend on the method of pain relief a birthing woman chooses to access during her birth. For example, epidural analgesia is generally only available at hospital, and that may be a factor in the choice to birth at hospital. While there are women who choose to give birth at hospital and have positive experiences, there are many women who birth at hospital as a result of complications arising in labour, and in instances where hospital is considered to be the safest place for mother and baby to be. The hospital is also the only location available where women are able to have caesarean births. It might be that women who are more anxious about birth and are unsure of their ability to manage the pain of contractions may desire to give birth at hospital, or feel safer having a team of medical professionals and surgical methods available just in case complications were to arise.

Birthing centres are another location available for birthing mothers. Women who have low risk pregnancies are able to birth there. It can be assumed that the women who chose to give birth at the birth centre had low risk pregnancies and were less likely to have complications arise during labour. Women who choose to birth at a birth centre are likely to have a desire to cognitively manage the pain of contractions, as there are less invasive pain relief

options available. Birth narratives suggest that the birth centre was a place where birthing mothers were able to relax because it was a nice environment that was less like a hospital, which made women feel comfortable.

Only two women gave birth at home within the current study, so conclusions cannot be drawn about this particular birth setting. Giving birth at home would allow a birthing mother an ownership of their birthing space and a perception of full control over the birthing space and the people that are allowed to enter that space. Generally, home is an environment where people are able to relax and feel comfortable. Mothers who choose to birth at home are likely to have developed good coping strategies to work with contractions, as the availability of medical pain relief is limited. Mothers who choose home birth may also have a desire to birth with minimal interventions (Jouhki, 2012), which was also reflected in the current study's birth narratives.

The process of choice and decision making may play more of a role in the relationship between birth location and birth experience. A New Zealand study by Grigg, Tracy, Schmied, Daellenbach, and Kensington (2015) found that there were differences in the attitudes between women who chose to give birth in the hospital compared with women who chose to give birth in hospital. Women who planned to birth at the birth centre expressed confidence in the birth process and their ability to give birth, while those who planned to birth in hospital did not (Grigg et al., 2015). However, both groups of women did express that they had confidence in their midwife. A New Zealand study of low-risk women's birth location choice found that mothers who planned to give birth at home were older, more likely to be multiparous, and had a comparable rate of maternal outcomes to other birth settings (Dixon, Prileszky, Guilliand, Miller, & Anderson, 2014).

Findings from Mondy, Fenwick, Leap, and Foureur (2016) support the importance of the birthing environment and the concept of ‘domestication of the birth space’, meaning that women who birthed in environments that were similar to a domestic birth space (birth centre and home) interacted with their birth space in different ways. Mondy et al. (2016) found that women who birthed in hospital and conventional labour spaces interacted with their environment in a passive way, while women who birthed in the birth centre or at home were able to take ownership of their birth space and encouraged an active role in the birth. The ability to take an active role in the birth appears to be related to perceived control, and is strongly supported by the findings of this study.

The labour event

The survey data revealed a significant relationship between birth type and labour complications with the birth experience. Women that experienced complications during labour or had an emergency caesarean birth had a higher likelihood of having a less positive birth experience. There was no relationship between parity and birth experience, meaning women regardless of whether they had given birth before had similar chances of having a positive birth experience.

For this study, the labour complications item was simple binary self-report item, and no further information was available about type or severity of complications. A variation of mild to severe complications may have occurred, which may have contributed differently to the birth experience but remain undetected in this study. It appears logical that labour complications would result in a less positive experience of birth, as it indicates that aspects of the labour had not gone as the birthing mother had hoped, signalling the possibility of less

perceived control. Complications may involve various interventions for the safety of the mother and baby, which may contribute to feelings of less perceived control and less security, both of which were associated with the birth experience. Labour complications may result in labouring and birthing in hospital, which is an environment that may not represent a comfortable location and might be contrary to the birthing mother's preference.

These findings add to a growing literature base that identified the relationships between labour complications and type of delivery with experiences of birth. Waldenström et al. (2004) reported that the most significant predictor of a negative birth experience was an emergency caesarean birth. The type of birth affected women's perceptions of their birth, with Bryanton et al. (2008) identifying it as one of five variables that were most predictive of birth perceptions. Mothers who gave birth by caesarean under general anaesthesia or epidural anaesthesia had a higher perception of their childbirth as a negative experience when compared to those women who birthed vaginally without epidural anaesthesia (Conde, Figueiredo, Costa, Pacheco, & Pais, 2008). Surgical models of birth were associated with less positive overall birth experience, which included both elective and emergency caesarean groups (Hildingsson, 2015). However, birth experience was significantly better for women that had an elective caesarean compared with vaginal delivery in an Austrian study (Schindl et al., 2003). Women who had an unplanned caesarean delivery looked back at their experience negatively when asked to recall their experience three years later (Rijnders et al., 2008). Complications for mother, child or both were identified as contributing to negative birth experiences (Henriksen et al., 2017). Similarly, intrapartum care that involved minimal interventions was found to be an effective

strategy to create a positive birth experience for birthing women (Taheri, Takian, Taghizadeh, Jafari, & Sarafraz, 2018).

This study found no relationship between parity and the birth experience which is in contrast to the majority of the literature regarding parity. The majority of studies report that multiparous women are more likely to have a positive birth experience compared to primiparous women (Dannenbring et al., 1997; Hildingsson et al., 2013; Waldenstrom, 1999). First time mothers were found to expect and experience more negative emotion during labour, and were more likely to appraise birth as traumatic and challenging (Ayers & Pickering, 2005). The difference in findings could be due to the characteristics of the women who participated in the current study, as the mothers are likely to be more proactive in regards to their wellbeing due to their willingness to participate in the pilot study.

Background and pregnancy characteristics

There was no significant association between age and birth experience in the current study. While some studies argue that a secure and stable life situation, which is associated with mature age, meant that women had more confidence in their births (Aune et al., 2015), this is not a finding that is supported in this study. The research around the relationship between age and the birth experience is mixed. While first time mothers aged between 15 and 20 remembered experiencing more pain and lack of control during labour, their overall experience of birth was not different compared with a reference group of women aged between 26-29 (Zasloff et al., 2007). In a separate study, older women aged between 30 to 39 were more likely to experience negative birth experience compared to women who were younger than 20 years old (Smarandache et al.,

2016). Sample characteristics could be a contributing factor to why age was not a significant finding in the current study, as there were very few younger women involved in the study. Similar to the reasons why parity was not a significant finding, it could be due to mothers in this study being more proactive about managing their pregnancy wellbeing and approach to managing labour.

Small sample sizes meant that there was not enough statistical power to test the associations between ethnicity and birth experience. Māori women appear to have a proportionately lower number of positive birth experiences in the current study, which could be a reflection of the health and social inequality experienced by Māori (Poata-Smith, 2013; Ratima & Crengle, 2013; Zambas & Wright, 2016). As a contrast, a study of low-risk New Zealand women found a greater number of Māori women planned to birth at a birth centre or home, compared with hospital (Dixon et al., 2014), and birthing in these locations have a stronger association with positive birth experiences as identified in the current study. Further research that explores Māori women's birth experiences would be beneficial to add further insight to this area.

There was a weak negative correlation between anxiety in the first assessment (less than 20 weeks pregnant) and the birth experience, but no significant correlation with anxiety later in pregnancy. There were no significant correlations between any other measures of emotional distress during pregnancy and the birth experience. This meant that the patterns of depression, anxiety or stress observed during pregnancy did not impact on the birth experience. Previous studies have identified a negative association between anxiety and the birth experience (Hofberg & Ward, 2003; Nilsson, Lundgren, Karlstrom, & Hildingsson, 2012; Waldenstrom, 1999), however the lack of relationship

identified between anxiety and birth experience in the current study may be due to the very low levels of distress measured in this group of women.

The four pillars of a positive birth experience

The current study found that perceived control, midwifery support, acceptance of labour pain and the birth space were important factors for positive birth experiences. This finding has been echoed in the literature, various studies have tried to define how this interconnection functions, focusing on one or two factors and their interaction. For example, midwifery support has been found to be associated with both women's sense of control during labour (Fair & Morrison, 2012; Harvey, Rach, Stainton, Jarrell, & Brant, 2002; Leap et al., 2010) and a positive experience of childbirth pain (Karlsdottir et al., 2017). Perceived control has been linked to satisfaction with pain relief during labour (McCrea & Wright, 1999). Control over decision making during labour helped women to deal with labour pain (Green & Baston, 2003; Klomp, Witteveen, de Jonge, Hutton, & Lagro-Janssen, 2017). Birthing in a space that is more like home rather than a clinical environment allowed women to use the birthing space in more creative and empowering ways, which allowed them to take control of their labour by being an active participant (Mondy et al., 2016). It is clear from the current literature base that the four concepts are interrelated. However, it appears that the way that each concept relates to one another is complex and dependent on an individual birthing mother's own context, preferences and choices.

Limitations

Limitations of this study include the research design and measures used in the study being set before I joined the pilot study research team. This meant that the

measures and design were selected before the study was conceived, and could not be tailored to the particulars of this topic. Measures of fear of birth during pregnancy, pain relief used during labour, categorising different degrees of severity of labour complications and additional information regarding vaginal births (unassisted or assisted) might have been useful in interpreting the results in relation to other birth experience studies. The quantitative study had a modest sample size, which meant that statistical power was limited, especially regarding questions that broke down the sample into subgroups such as ethnicity.

The characteristics of the women within the study have to be taken into consideration when interpreting the results of this study. The women in the study had higher levels of education than the broader New Zealand population. Women were also measured as having lower levels of emotional distress than a comparison sample of New Zealand pregnant women. Secondly, the participants recruited for this study were taken from a pilot study that looked at the use of a smartphone app to manage stress and changes during pregnancy. It could be theorised that women who were interested in this particular project were already proactive in their own health and wellbeing, and they also had access to an intervention that might have had an effect on their experience of pregnancy and childbirth.

In regards to measuring the birth experience, recall bias of the birth must be considered. The current study measured birth experience one month after birth. The best time to approach women about their birth experience is unknown (Hildingsson et al., 2013), but there could be differences in when the birth experience was measured. However, Rijnders et al. (2008) argues that memories of birth remain clear for a long time afterward.

Implications for policy and future research

The results suggest that New Zealand's partnership model for maternity care may contribute to the positive experiences of the majority of women in the study. The concept of partnership is key for the midwifery profession, where a partnership between birthing mother and midwife is based on a relationship of trust, shared decision making and responsibility, negotiation and understanding (New Zealand Midwifery Council, 2010). However, the current climate for the midwifery profession in New Zealand is reaching a crisis point, as large numbers of midwives are leaving the profession due to dangerous working conditions, long working hours, and lower pay rates (New Zealand College of Midwives, 2018). Current industrial activity has seen midwives striking across the country in protest of improved working conditions (McCulloch, 2018).

This study found a link between the relationship with the midwife and birth experience. The impact of decreasing number of practicing midwives is likely to have a considerable impact on birthing women, and possibly their experiences of maternity care and birth. It is important that future efforts address these issues in order to retain midwives and provide incentives for others to enter the profession. The wellbeing of birthing women in New Zealand could potentially be at risk if the current situation was to continue without appropriate resolution. If there are disruptions to the current maternity care system in place, it may be detrimental to birthing women. Further research highlighting the perspectives of midwives in women's positive birth experience would be of interest, especially identifying what factors midwives identify as important for birthing mothers, and whether a positive birth experience for the mother is a positive experience for their midwife.

Another area that offers an important area of focus for future research is Māori women's birth experience. Given that the outcomes for Māori women in this study appeared to be less positive, it will be important to explore factors relating to the birth experience in a research project that uses appropriate kaupapa Māori methodology.

Conclusion

Positive birth experiences have previously been found to enhance psychological wellbeing and self-esteem, which can help women feel confident in their journey into motherhood. A positive childbirth experience could be a protective factor to help prevent psychological distress in the period after birth. Therefore, this study aimed to explore factors associated with positive childbirth experiences for New Zealand women. Analysis of survey data and birth narratives of women identified four main pillars of a positive childbirth experience. From the study group, 65% of women had a positive childbirth experience. The development of the 'right mindset' assisted in women feeling perceived control, and was found to be the strongest factor associated with positive birth experiences. Midwifery support during labour was also found to be significant, with women valuing a trusting and personal connection with their midwife. The relationship between pain and birth experience was complex, but overall the study revealed that when women framed pain in a positive way, they were able to cope with contractions. Finally, the birthing space was important in providing women with a feeling of security and comfort, which assisted in women's experience of labour. The study findings were consistent with existing literature on the topic.

This research supports the maternity care system and the midwifery partnership model of practice with birthing women, and is a model that is highly considered by other countries. However, the New Zealand maternity system is currently in crisis, with midwives leaving the profession due to poor working conditions and inadequate remuneration (New Zealand College of Midwives, 2018). This research indicates the importance of the context of maternity care for birthing women, and suggests that the issues within the context of maternity care are addressed in order to retain skilled midwives in the profession. If further action is not taken, the effects on birthing women and their families could be devastating.

Women's final thoughts on their positive birth experience

I wouldn't have changed anything. Like, it was so good.

Amber, multipara

It was also emotional. I was just, glowing. I was excited. It was fun. I know that people don't describe their birth as fun, do they? If I had to put it into simple words, I would describe birth as empowering.

Laura, multipara

I thought it went really well, I couldn't have been happier.

Maia, multipara

I didn't at any point really feel unsafe. I felt a little bit scared when they said I couldn't have an epidural mainly because I was so scared it was going to end up with an emergency caesarean because I was so physically exhausted. But I was never petrified scared at any point or anything, so I guess that's what made the experience positive was because I felt comfortable and I knew that I was gonna get a baby.

Kate, primipara

Afterward you're buzzing, I guess. I was exhausted, but I couldn't sleep. I remember lying the whole night thinking holy shit, I am so lucky that it all went well. It was surreal, did that really just happen? I guess it was just luck to actually have him how I wanted to

Ashley, primipara

'Honestly, it was a dream though. I couldn't have thought of a more ideal birth or a more ideal experience'

Penelope, multipara

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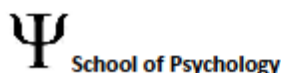
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Appendices

Appendix A: Information Sheet for Current and Pilot study



Childbirth experience research

Information for participants

My name is Ajay Nielsen and I am completing my masters thesis in Psychology at the University of Waikato. I became interested in the topic of positive childbirth experiences and the wellbeing of mums in the early weeks of their child's life after the birth of my first child in July 2016. The journey of developing my thesis research has been in parallel with my own personal journey into motherhood.



You have been invited to participate in this research as you've indicated that your recent childbirth experience was overall a positive one. Key topics that I would like to explore will include; mental, physical and emotional preparation for childbirth, your birth story, hopes and aspirations for childbirth, and thoughts as to what factors contributed to your childbirth experience.

My research will involve an interview, which will be scheduled to take place at a convenient time and place and should take no longer than an hour. I am more than happy to accommodate you and baby's needs during our session. You may invite a support person to stay with you during the interview if you wish.

The interview will be audio recorded, and you will have the opportunity to view a transcript within four weeks of the interview. The information gathered in the interview may be used in my masters thesis and other academic publications and presentations that will be publicly available. Information that you share with me will remain anonymous and I will not disclose your participation in this project with anyone.

Participation in the study is voluntary, which means that you don't have to answer any questions you'd rather not talk about. If you change your mind about participating, you can withdraw from this research project up to 14 days after receiving the interview transcript.

This research project has been approved by the Human Research Ethics Committee (Health) of the University of Waikato under HREC (Health)#2017-36. Any questions about the ethical conduct of this research may be addressed to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

If you have any questions or concerns about this study at any stage, you can contact:

Researcher: Ajay Nielsen, email: arb22@students.waikato.ac.nz

Supervisors: Dr Carrie Barber, email: carrie.barber@waikato.ac.nz

Dr Bridgette Masters-Awatere, email: bridgette.masters-awatere@waikato.ac.nz

Positively Pregnant: Evaluation and Refinement of a mobile phone app

Pregnancy is a time of change—physical, social, financial, psychological. Many important parts of life are changing, all at the same time. These changes can be exciting and joyful, but also challenging and stressful.

We have been working to develop a mobile phone app called “Positively Pregnant” to help pregnant women to manage the challenges and changes of pregnancy and use this time to reflect on strengths, supports, stresses, and strategies—what works for *you* to thrive and cope with whatever life brings? If you participate in this research, you will receive a copy of the mobile phone app that you can try out for the rest of your pregnancy (and beyond, if you want), and we will ask you to give us feedback about the app, and about your health behaviours and levels of stress and distress over the next few months, until your baby is one month old.

The purpose of this project is to try out and evaluate Positively Pregnant, to see how helpful it is, and what suggestions people have to make it better. Positively Pregnant has four different types of modules in it; there are some (called “Know Yourself”) that help you to take inventory and assess yourself, some (called “Conversations”) that provide suggestions for things you and your partner or support person could talk and think about in preparation for parenting, activities (called “Do Something”) that are things you can to relax and to manage stress and improve wellbeing, and some information (called “Find Out”) about the social and emotional side of becoming a mother. If you’re in the study, you can look through the app and use anything you think you would find helpful. You aren’t required to do any particular part. We are trying out two slightly different versions; which one you get is randomly chosen.

We will ask for your input in three ways.

- First, the app will collect information on what modules you use and what you enter into the app. This information will be linked to a unique ID the app creates; you won’t put your name into the app. You will be asked to send this information to us three times during the study by pushing a button in the app while you have access to internet/wifi.
- Second, we will ask you to fill out some questionnaires online (you can do it on your phone or a computer) before you start using the app, and at three points after that (when you are about 24 weeks pregnant, 36 weeks pregnant, and a month after the baby is born). They will ask about how you are feeling, your health behaviours, your feedback on the app, and (in the last one) you experience of birth and early parenting. Each survey takes about 10-15 minutes to complete.
- Third, after you’ve been using the app at least a month or so, we may invite you to a focus group to give us feedback and suggestions on the app. A focus group is a small group discussion with several other women who are also pregnant and using the app. We will take notes and use the ideas to help improve the app. If we are organizing a focus group in your area, we will contact you and invite you to attend.

Your feedback will all be anonymous, you don’t need to answer any question you prefer not to, and you can withdraw at any time.

This study has been reviewed and approved by the University of Waikato School of Psychology Research Ethics Committee. If you have any questions or concerns about your rights as a participant in this research study, you can contact the chair of that committee, Rebecca Sargisson (rebeccas@waikato.ac.nz).

If you have any questions, please feel free to ask! The leader of this project is Carrie Barber, phone number 07 837 9221; e-mail address cbarber@waikato.ac.nz.

Thank you for your interest in finding out about this project!

Appendix B: Consent form for current and pilot study



CONSENT FORM

A completed copy of this form should be retained by both the researcher and the participant.

Research Project: Positive Childbirth Experiences

Please complete the following checklist. Tick (✓) the appropriate box for each point.	YES	NO
1. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
2. I have been given sufficient time to consider whether or not to participate in this study		
3. I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet		
4. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study up to 14 days after receiving the interview transcript		
5. I have the right to decline to participate in any part of the research activity		
6. I know who to contact if I have any questions about the study in general.		
7. I understand that the information supplied by me could be used in future academic publications and presentations.		
8. I understand that the interview will be audio recorded and I will be given a copy of the transcription to make comments on		
9. I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.		
10. I wish to receive a copy of the findings		

Declaration by participant:

I agree to participate in this research project and I understand that I may withdraw at any time. This research project has been approved by the Human Research Ethics Committee (Health) of the University of Waikato under HREC(Health)#2017-36. Any questions about the ethical conduct of this research may be addressed to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Participant's name (Please print): _____

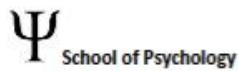
Signature: _____ Date: _____

Declaration by member of research team:

I have given a verbal explanation of the research project to the participant, and have answered the participant's questions about it. I believe that the participant understands the study and has given informed consent to participate.

Researcher's name (Please print): _____

Signature: _____ Date: _____



CONSENT FORM

A completed copy of this form should be retained by both the researcher and the participant.

Research Project: Positively Pregnant App Pilot

Please complete the following checklist. Tick (✓) the appropriate box for each point.	YES	NO
1. I have read the Participant Information Sheet (or it has been read to me) and I understand it.		
2. I have been given sufficient time to consider whether or not to participate in this study		
3. I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet		
4. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without penalty		
5. I have the right to decline to participate in any part of the research activity		
6. I know who to contact if I have any questions about the study in general.		
7. I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.		
8. I wish to receive a copy of the findings		

Declaration by participant:

I agree to participate in this research project and I understand that I may withdraw at any time. If I have any concerns about this project, I may contact the convener of the Psychology Research and Ethics Committee (Dr Rebecca Sargisson, phone 07 557 8673, email: rebeccas@waikato.ac.nz)

Participant's name (Please print): _____

Signature: _____

Date: _____

Declaration by member of research team:

I have given a verbal explanation of the research project to the participant, and have answered the participant's questions about it. I believe that the participant understands the study and has given informed consent to participate.

Researcher's name (Please print): _____

Signature: _____

Date: _____

Appendix C: Email Invite for current study

Hi,

Congratulations on the birth of your baby!

You recently took part in the Positively Pregnant mobile phone app study through the University of Waikato. I was part of the Positively Pregnant team, and now I'm completing my master's thesis on childbirth experiences.

I would like to invite you to participate in my research as I would love to hear your birth story and your views about the experience of labour and birth.

I've attached some extra information about the research, and if you choose to participate you'll receive a \$20 MTA voucher. Please let me know if you're interested, and we can arrange a suitable time to talk.

Kind regards,

Ajay Nielsen

Ph: 021 246 2529

arb22@students.waikato.ac.nz

Appendix D: Questionnaires

Overview: There are four assessment points, with different sets of components at each; in this document, each set of questions will be presented once, with indication of which assessment points will contain it, to save space. These surveys are completed online, on a computer or mobile phone; they have been optimized to work well on a mobile phone. These are the Word exports of the questionnaires, which look somewhat different in the program; we are happy to provide a link if reviewers would like to see the four surveys as they appear to participants.

Measure	Pre	24 wks	36 wks	1 mo PN
Background Demographics/maternity history	X			
Depression, Anxiety and Stress (DASS)	X	X	X	X
Edinburgh Postnatal Depression Scale (EPDS)	X	X	X	X
Perceived Stress Scale (PSS)	X	X	X	X
Prenatal Health Behavior Scale (PHBS)	X	X	X	X
Global health rating	X	X	X	X
Satisfaction and app use		X	X	X
Parenting Sense of Competence Scale (PSCS)				X
Obstetric outcomes and childbirth experiences (CEQ)				X

Background Demographics/maternity history (Pre)

Are you currently working?

- Yes, full time (1)
- Yes, part time or casual (2)
- Yes, volunteer/unpaid work (3)
- No, not working outside home (4)

Are you (choose all that apply)

- Caring for children (1)
- Caring for other family members (2)
- Unemployed (3)
- Studying (4)
- Disabled or unable to work because of illness (5)

What is the highest level of education you have completed?

- no formal educational qualifications or diplomas (1)
- High school/secondary diploma (what type?) (2) _____
- Some tertiary/university/undergraduate classes. (3)
- Tertiary/university/undergraduate degree (please specify) (4)
- Tertiary/university graduate-level degree (please specify) (5)

Are you currently studying?

- Yes (1)

- No (2)

Intro to postnatal (1 month) assessment

Wow, you've got a new baby! We hope it is going well--and know you are probably sleepy and busy with all the jobs of motherhood. We really appreciate you taking a few minutes to complete this survey--it means a lot to our work in understanding how we can support new families. Remember, you can stop and come back later if you need to, either by keeping the survey open, or by saving and returning to it.

Brief Satisfaction and feedback (1 month assessment)

Have you been using Positively Pregnant over the last two weeks?

- Haven't used it (why not?) (1) _____
- Once or twice (2)
- A few times a week (3)
- Most days at least once (4)
- More than once a day (5)

Overall throughout the time you have used it, how satisfied were you with Positively Pregnant?

- Extremely satisfied (23)
- Somewhat satisfied (24)
- Neither satisfied nor dissatisfied (25)
- Somewhat dissatisfied (26)
- Extremely dissatisfied (27)

Would you recommend Positively Pregnant to a friend who was pregnant?

- Definitely not (1)
- Probably not (2)
- Maybe (3)
- Probably yes (4)
- Definitely yes (5)

Any comments or suggestions about the

Positively Pregnant app? CEC and obstetric

outcomes (1 mo only)

Next are some questions about your experiences during labour and birth. Please indicate how you felt at the time--remember, there are no right or wrong answers--it's about how you felt.

Labour and birth went as I had expected

- Totally agree
- Mostly agree

- Mostly disagree
- Totally disagree

I felt strong during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt scared during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt capable during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I was tired during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt happy during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I have many positive memories from childbirth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I have many negative memories from childbirth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

Some of my memories from childbirth make me feel depressed

- Totally agree
- Mostly agree
- Mostly disagree

- Totally disagree

I felt I could have a say whether I could be up and about or lie down

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt I could have a say in deciding my birthing position

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt I could have a say in the choice of pain relief

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

My LMC/midwife devoted enough time to me

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

My LMC/midwife devoted enough time to my partner

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

My LMC/midwife kept me informed about what was happening during labour and birth

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

My LMC/midwife understood my needs

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt very well cared for by my LMC/midwife

- Totally agree
- Mostly agree

- Mostly disagree
- Totally disagree

My impression of the team's medical skills made me feel secure

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

I felt I handled the situation well

- Totally agree
- Mostly agree
- Mostly disagree
- Totally disagree

How much pain did you experience during labour? [rating on slider]

_____ Pain

How much did you feel in control of your childbirth experience? [rating on slider]

_____ Control

How secure did you feel during your childbirth experience? [rating on slider]

_____ Security

How many weeks' gestation (how far along) was your baby when he

or she was born? Where did you plan to have your baby?

- Hospital (1)
- Birthing centre (2)
- Home (3)
- Other place (4) _____

Where did you have your baby?

- Hospital (1)
- Birthing centre (2)
- Home (3)
- Other place (4) _____

How was your baby delivered?

- Vaginal delivery (1)
- Unplanned cesarian section (2)
- Planned cesarian section (3)

Did you have any complications or problems during the labour and delivery?

- Yes (4)
- No (5)

If No Is Selected, Then Skip To How would you rate your overall

Please describe these problems briefly:

How would you rate your overall birth/labour experience? [rating on slider]
(negative - positive)

_____overa
ll birth/labour experience

Would you describe the birth as traumatic?

Not at all (1)

Somewhat (2)

Very much (3)

Extremely (4)

If Not at all Is Selected, Then Skip To Next are some questions about how you...

If you've had a traumatic experience during childbirth, it can help to talk about it or make sense of it for yourself. Support is available from other women, from midwives, and from counselors. For more information you might look at this website: <http://www.tabs.org.nz/>

Would you like to take part in a project about childbirth and labour experience? A Positively Pregnant team member is currently doing her masters thesis on this topic and would like the opportunity to contact you to take part. Taking part in the research would involve talking about your own childbirth and labour experience either in person or over the phone.

Yes

No

DASS (all 4 assessments)

For the following items, please read each statement and select a choice which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

I found it hard to wind down

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I was aware of dryness of my mouth

- Never (0)
- Sometimes (1)
- Often (2)

- Almost always (3)

I couldn't seem to experience any positive feeling at all.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I found it difficult to work up the initiative to do things.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I tended to overreact to situations

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I experienced trembling (e.g., in the hands).

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I felt that I was using a lot of nervous energy.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I was worried about situations in which I might panic and make a fool of myself.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I found myself getting agitated.

- Never (0)

- Sometimes (1)
- Often (2)
- Almost always (3)

I found it difficult to relax.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I felt down-hearted and blue.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I was intolerant of anything that kept me from getting on with what I was doing.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I felt I was close to panic.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I was unable to become enthusiastic about anything.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I felt I wasn't worth much as a person.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)
- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).

- Never (0)
- Sometimes (1)

- Often (2)
- Almost always (3)

I felt scared without any good reason.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

I felt that life was meaningless.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

Appendix E: Support resource sheet for mothers

Contact details for support agencies

Plunketline

A free telephone advice service offering advice on child health and parenting issues. Available 7 days a week, 7am–midnight.

Ph: 0800 933 922

www.plunket.org.nz

Healthline

A free 24-hour telephone advice line providing support for parents. Registered nurses assess health needs and can refer parents to appropriate local services.

PH: 0800 611 116

Waikato Family Centre

The Waikato Family Centre offers a free, friendly and helpful family support for any family/Whanau with a child under 24 months of age. Their trained and experienced staff can provide personal help and advice on a number of parenting concerns.

PH: (07) 834 2036

<http://www.waikatofamilycentre.co.nz/>

La Leche League

La Leche is an international organisation providing support and advice to mothers about breastfeeding. There are groups based throughout New Zealand.

<http://www.lalecheleague.org.nz>

<https://www.facebook.com/lllhamiltonnz/>

Parent Helpline

A free telephone advice line providing support with all parenting challenges. Available from 9am to 11pm, seven days a week. The Parent Helpline also provide affordable family therapy, counselling, parenting education, mediation service and information on parenting.

PH: 0800 568 856.

<http://www.parenthelp.org.nz/>

Depression Helpline

If you need someone to talk to about the way you are feeling, the Depression Helpline is available 24/7.

PH: 0800 111 757

<https://depression.org.nz/>

Appendix F: Recruitment material for pilot study

Pregnancy...

Awe-inspiring and terrifying?
Full of changes, choices, and
challenges?



...there's an app for that!

Want to help test a new smartphone app
to guide mothers toward healthy stress
management and wellbeing?

We are looking for women in the first half
of pregnancy who are willing to try out the
app and give us their feedback, both on the
app and how they are feeling and coping.

For more information, take a card, or e-mail

Positivelypregnant@waikato.ac.nz

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