Independent Qualitative Evaluative Study of Calmbirth Antenatal Classes

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ABSTRACT
High childbirth intervention rates impose risk to women and infants. It is imperative that ways to mitigate this are found. Calmbirth is an antenatal program that incorporates a variety of strategies that could be helpful. The aim of this qualitative evaluation was to explore the acceptability and experiences of attending Calmbirth antenatal classes. Eighteen individual and/or couple postnatal interviews were conducted. Analysis using a psycho-emotional conceptual framework was applied to data. The study found that Calmbirth courses empowered participants, increased their health literacy, and provided them with more personal psychosocial coping strategies. While some participants found the classes not helpful, others experienced a positive reframing of childbirth. Although Calmbirth is acceptable and experienced positively by most women and partners, further work is required to address broader sociocultural influences in places of birth.

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INTRODUCTION AND BACKGROUND

High childbirth intervention rates have been shown to impose unnecessary risk to women and their infants and have been shown to be highly variable across regions (Seijmonsbergen-Schermers et al., 2020). Moreover, there is a growing global recognition that excessive and/or unneeded use of childbirth interventions can cause harm (Miller et al., 2016). The call to evidence-based acceptable approaches and respectful maternity care is vital to address this concern.

There is emergent evidence that antenatal education may influence and/or impact childbirth intervention rates (Hong et al., 2021) and lead to cost savings in maternity care (Levett et al., 2018). Furthermore, antenatal fear and anxiety related to childbirth have been shown to be risk factors for poor childbirth experiences (Rúger-Navarrete et al., 2023). The evidence suggests that antenatal classes focusing on psychosocial and emotional preparation potentially lessen intervention rates (Cutajar et al., 2020; Saxbe et al., 2018; Tabib & Crowther, 2018). Moreover, significant evidence demonstrates that certain antenatal interventions may mitigate the emotional and psychological impact of childbirth-related anxiety and fear (Fairbrother et al., 2022; O'Connell et al., 2021; Striebich et al., 2018). A 2018 Cochrane review (Smith et al., 2018) found that relaxation techniques may help women cope better with labor pain but stated that

the quality of the evidence varied and variations in techniques made this area of study complex. The Cochrane review concluded that no definitive evidence existed on how antenatal-taught relaxation, breathing techniques, and visualization impact assisted vaginal or cesarean birth. Although the review did find that such techniques assisted women to feel more in control in the birthing experience, an Australian study also found that nulliparous women in Sydney, who attended psychoprophylaxis (a method for coping with pain of labor by using relaxation and breathing techniques) couple-based antenatal education program, had a trend toward higher rates of vaginal birth and lower rates of epidural use (Shand et al., 2022).

This article reports on a service evaluation study of a pilot antenatal intervention using a Calmbirth Childbirth Education Program in Auckland. The high childbirth intervention rates at the Auckland City Hospital maternity services motivated the directors of services to engage proactively in seeking solutions to mitigate rates recorded in intrapartum care. They selected and piloted the delivery of the Calmbirth childbirth education program. This program provided an integrated approach using strategies such as mindfulness, relaxation, and visualization (see Table 1 for tools and strategies taught). Calmbirth classes were five 2-hour sessions delivered over several weeks, either online or in person, depending on COVID-19 restrictions at the time of the evaluation. When COVID-19 restrictions were lifted, 12 hours of in-person, whole-day sessions were provided on a weekend as an alternative to the 2-hour classes.

These Calmbirth classes were newly offered and fully funded for a 10-month period from September 2020 to June 2021 to a cohort of women planning to birth at Auckland City Hospital. Part of the pilot involved an independent service evaluation.

The evaluation was undertaken independently by a local university and included a systematic scoping review of the tools and strategies used in Calmbirth, an online survey and individual and/or couple interviews. The evaluation was a qualitative exploration of Calmbirth attendees' experiences and not intended to examine or measure efficacy. The questions of the evaluation study were "How did participants of Calmbirth experience the course?" and "Was the content and delivery of the course useful and agreeable?" This article reports on the outcomes of the qualitative data from a survey and interviews and presents and discusses the themes related to the psycho-emotional experiences of participants who attended the Calmbirth classes.

TABLE 1.

Tools and Strategies Taught in Calmbirth Classes (Adapted From https://Calmbirth.com.au)

Understanding the psychology of birth
Understanding the physiology of birth
Learning and practicing contents of a toolbox for birth: visualizations, meditation, massage, acupressure, and active birth positioning
Highlighting the role of the partner—both emotionally and physically
Preparing for all types of childbirth and setting realistic expectations, for example, interventions
Exploring conscious parenting, for example, antenatal and postnatal bonding and attachment theory
Learning self-care throughout the childbirth year

Psycho-Emotional Conceptual Framework

A conceptual framework helps explain key concepts and the relationships between them and provides a way to organize the results of the data and foreground the purpose of the study (Ravitch & Riggan, 2016). A purposive conceptual framework informed by the outcomes of our initial scoping review and further adapted from two previously published studies in the area was developed: first, previous antenatal education research by Downer et al. (2020) that focuses on health literacy in antenatal education and the importance of how classes are delivered to participants to meet the informational needs of participants and, second, the work of Escott et al. (2009), that focused on how the promotion of psychological and cognitive knowledge in antenatal education can facilitate greater self-efficacy through learned coping strategy. Health literacy refers to how individuals understand information that supports their optimal health and is understood over three levels: functional, interactive, and critical (Nutbeam, 2000). The acquisition of this understanding is aligned with an individual's cognitive and social skills across these three levels:

- Functionally, it refers to the ability for individuals to pull together information relevant to their health.
- Interactively, refers to how individuals reflect upon and adapt information to their own

context and needs to inform health-related decisions.

- Critically, it relates to a higher level of cognitive engagement, in which individuals proactively dialogue with health systems and processes.

The Downer et al. (2020) and Escott et al. (2009) sources together foreground content and the mode of delivery of antenatal education which aligned with the principles of this evaluation. This conceptual framework was not intended to develop or explain Calmbirth but helped us intentionally navigate through the qualitative data analysis (see Table 2).

METHODS

All women planning to birth at the Auckland hospital were offered Calmbirth classes during the 10 months of the pilot. Eight hundred and thirty-six women and their birth partners accepted the offer to attend the classes and participated in the Calmbirth pilot program. All pregnant women and partners in the course were invited to participate in an online Qualtrics survey to explore their experience of Calmbirth in relation to their labor and birth and invited to take part in semistructured interviews. Recruitment for the interviews ended once all courses and surveys were completed. Recruitment and data collection were not started until full ethical approval was obtained.

Participant Interviews

Of the 150 participants who did the survey, 18 participants from across the 28 pilot courses were selected purposively for diverse representation from a range of different course dates, course formats (online and in person), ethnicities, and self-identified sexualities and genders. The final interviews were conducted with 13 women and 5 partners (4 men and 1 woman); no participant identified as transgender or nonbinary. All interview participants were first-time parents, and primiparous women's experiences of Calmbirth are dominant throughout the study. Ethnicities included were six New Zealand (NZ) Europeans, five Chinese, four British, and one other European, and two did not specify their ethnicities. No Māori or Pacific participants expressed interest in being interviewed. Women's partners or a support person were also invited and encouraged to join, yet only five partners were interviewed.

Interview Design

Interviews occurred approximately 6 weeks postbirth. Six weeks is the time in the NZ context that women and their infants are discharged from maternity services. The interviews were semistructured using indicative questions and probes formulated from the scoping review, survey data, and ongoing interrogation of themes emerging in previous interviews. Interview length ranged from 30 to 60 minutes. All interviews were conducted by telephone. The indicative questions and probes yielded responses from participants about their experiences, perceptions, opinions, feelings, expectations, and knowledge about their own unique encounter with Calmbirth classes. Interview questions included the following: "Can

TABLE 2.

Developed Psycho-Emotional Conceptual Framework for This Study

Individualized psychosocial coping	Increasing range of coping and cognitive-based strategies
	Identifying and understanding the nature of one's own coping styles
	Developing own unique set of coping strategies and preferences
	Ability to adapt to changing context of childbirth
Health literacy and being empowered	Health literacy:
	Functional level—ability for individuals to bring together information relevant to their health
	Interactive level—how information is reflected upon and adapted to personal context and needs informing health-related decisions.
	Critical level—relates to a higher level of cognitive engagement, in which individuals proactively dialogue with health systems and processes.
	Empowering:
	Strengthening confidence, self-efficacy, and control for decision-making
	Knowing individual preferences are honored (e.g., sociocultural beliefs)
Significance of the shared childbirth experience	Birth partner active involvement
	Valuing lived experiences of classes and subsequent childbirth journey

you tell me about your experience of attending the Calmbirth classes?" and "How did you find the content of the Calmbirth classes?" Questions to the partner included the following: "Can you tell me about the influence or impact the Calmbirth classes had on your involvement in the birthing experience?" and "How did the classes prepare you for supporting your partner?" For example, probes included the following: "You said [xxxx] can you tell me more about that?" and "You mentioned [xxxx], can you tell me how that felt?"

Analysis

The interview data were thematically analyzed using template analysis. Template analysis is a style of analysis that follows a set of procedures to guide analysis of qualitative data and is useful in team approaches to qualitative data analysis (Brooks et al., 2015), and the psycho-emotional conceptual framework (see Table 2) helped provide depth and meaning to the analysis. To begin, the research team read the transcripts to familiarize themselves with the data. Subsequently preliminary coding of a subset of the data (three transcripts) was carried out to develop the draft template. An iterative process was then conducted to analyze data in which the research team analyzed the remaining transcripts in rotation adding to or revising codes with new data. The transcripts moved in rotation between researchers. All interview transcripts had at least a second round of analysis to further refine, confirm, and revise coding. The analysis team had the option to have a third researcher do further analysis on a transcript when consensus was not obtained in the initial two rounds.

The initial coding was mainly in pithy-type statements that required refining into themes—this was a process of coalescing several codes until consensus on the final themes was reached. The psycho-emotional conceptual framework helped organize the themes and subthemes and foreground the purpose of the evaluation and answer the evaluation questions. Pseudonyms were used at every stage of the research after the initial interview, and those same pseudonyms are used in this article.

RESULTS

Demographics of Survey Participants

Of the 150, 32% identified as NZ European, 15% Indian, 11% Chinese, and 10% identified as other Asian with less than 10% identifying as either Filipino, or Indonesian, Sri Lankan, Japanese, and Vietnamese. Approximately 7% identified as Middle Eastern or Latin American with only 4% of participants identifying as Māori, 1% Pasifika, and 1 person did not specify their ethnicity. The participants in the survey (127/150, 84.67%) started attending Calmbirth classes between 29 and 36 weeks' pregnant, 5/150 attended before 20–24 weeks, and 5/150 attended after 37 weeks.

Thematic Results

Analysis culminated in three distinct areas with themes and subthemes.

Area 1: Experiential Impact Calmbirth Had on Participants

Theme: Positively Reframing Birth. Calmbirth classes helped the course participants positively reframe the birth, altering their thinking to a positive experience that changed their expectations of the birth.

Hazel: [The classes improved] both of our well-being going into that last trimester and increasing our knowledge of what was going to happen and how we felt about it as well. Yeah, and that was a real turning point for us in terms of taking away that fear. Of the actual birth itself being like this horrendous thing and it turned it into something really special that in our perception at least that it was going to be a really special moment.

For Diana the course transformed the childbirth experience:

Diana: My opinion changed; you know it was different. It became more focused on, I just want us to be safe, both me and the baby. And that I felt I had techniques to deal with whatever came at me.

Carla reflects on the influence of the classes:

Carla: It (Calmbirth) was quite a cool experience. I was talking to the midwife the next day and I was like 'that was nice[laughs]….' Calmbirth made me think about it all differently.

Erin describes an empowering experience:

Erin: Calmbirth made it so much less serious and less clinical…. I understood it's going to be like the most painful thing ever but you'll get through it and, like you'll forget it so best not to think about it—the Calmbirth got me through it, made it seem more natural and a lot less technical than what was in my head, also showed me I have choices…it opened my eyes to what the body is capable of.

Theme: Control and Agency. Erin's sense of being more empowered suggested a greater level of control and agency:

Erin: [Calmbirth] made sure we realize that everything's in our consent… [before the course] I wouldn't have said no to anything.

Agency in this context refers to having the ability to act and to control what is happening around you including decision-making. Kamila and Anna reported similar experiences of preparedness, control, and agency:

Kamila: I felt much more confident, and I think I did feel reasonably calm. When I went into labor, I felt like I knew not necessarily what to expect, but like I had strategies and a plan in place to cope with it and I felt much calmer afterward...

Anna: I'm a lot more confident in what I had already planned in terms of yes, I can do it… Being a first-time mum, I felt the course really provided me assurance and confidence… I had a very positive experience going through the course and I felt a lot more prepared.

Stories of confidence and self-efficacy were found to have an impact on decisions. Frances describes how she felt more confident and developed a level of self-efficacy and confidence in her decisions and how her partner felt less apprehensive:

Frances: Calmbirth techniques helped us stay at home longer and feel less anxious about not being in hospital.

For these women, confidence was knowing they could make positive decisions for their labor and birth. For Frances and her partner, the course provided an emboldening that manifested in the confidence to stay longer at home before going to the hospital in labor.

Theme: Helpful Strategies and Tools. The experiential impact of the strategies and tools learned at Calmbirth was a recurrent area the participants talked about. For many, these tools helped the women and their partners focus and be mindful and redirect attention from potential fear and anxiety.

Kamila: I was much more focused on my labor, and I felt like I had plans and strategies and ways to just keep mindful throughout the whole thing rather than going to these extreme concerns. I did find that during the labor and even when we did go to the emergency care, I was just focused on me and my baby, and none of those other stories came to mind. I was just focusing on the strategies...

Conscious breathing. Brie and Hazel describe how the taught breathing techniques were helpful:

Brie: …the breathing was mainly what I used in the actual labor, which I don't think I would have really known how to do or kind of thought about it, if I hadn't done the course.

Hazel: So during some of the really uncomfortable examinations, whether we're trying to break the waters and having to move the cervix it was really uncomfortable, so we're definitely doing the breathing then yeah that works.

Shifting mindset. While conscious breathing emerged as a useful tool used by many, participants also reported using the visualization and mindfulness tools. They described the benefits of mindfulness more generally as having a positive impact on their ability to shift their mindset, be in the moment, calm themselves, and picture a positive birth. This also influenced partners. Carla describes how her partner used these techniques:

Carla: Being in the busy lifestyle, we work, come home, do a bit of exercise, you don't think about meditating or taking some time out for yourself. [Calmbirth and its techniques] is good cause it helped us sleep.

It was apparent that conscious breathing, visualization, and mindfulness were new ideas and skills to the participants interviewed yet helped shift mindsets to one that focused on the importance of personal well-being.

Theme: Partner Participation. Increased partner engagement emerged as a key theme. Participants reported that Calmbirth equipped their partner with tools to navigate the birthing experience and helped them feel they have a place or role in childbirth. Christopher describes how he had a sense of revelation:

Christopher (partner): There was more reassurance of what I could do as a partner while she is going through the whole labor process. When you watch movies, the guy just stands there, does nothing, doesn't know what to do, but there's heaps of little things you can do to be supportive and to be there. Learning all the techniques and be there to support her helps. It didn't feel like I was in the way. It prepared us for that whole communication as well. I knew what was happening, so I didn't need to keep asking if she was alright, or how she was feeling. I knew what I should be doing, rather than be annoying…. It showed me my role. How I could be more supportive. I didn't feel useless. I was more involved with the pregnancy. Other guys were playing around with gas. But you can have a big say in what happens. Fend people off.

Jane found her partner more helpful:

Jane: He's just like 'okay, like just calm down, and let's do what we've been practicing' and he was able to bring me back to the moment and start like visualizing all the things that we had planned earlier on at the class and afterward..."

Theme: Teamwork. The course also promoted increased engagement between the couples, like a team working together. Throughout the data, the significance and importance of birth partners were highlighted, and the pronouns "we," "our," and "us were expressed often. Hazel illustrates this:

Hazel: We started looking at it like that, that this was a moment (the birth) to behold, rather than to be afraid of, and I think it made us a bit more proactive about really discussing what we wanted for the birth and how we wanted it to be and how we wanted it to feel.

Area 2: Acceptability of Calmbirth. In this area, there were both affirmations and misgivings about parts of the course.

Theme: Significance of the Educator. The significance of the educator approach also had a clear influence on the learning. Maya describes her experience:

Maya: Really loved it really, really loved it. She [the Calmbirth educator] makes us all connected in the class. I don't think I switched off once during the 2 days.

Theme: Accessibility and Flexibility. Participants mentioned that they found the accessibility and flexibility of the courses as helpful and something that enhanced their experience specifically in terms of cost and format although timing for some was a concern. The free cost of the course was appreciated by many of the participants:

Leah: I heard about Calmbirth from a podcast, a couple of women had mentioned it, and so I researched it. I wouldn't have done it if it wasn't free. I like to try and find a cheaper way to do things so I probably would have just read books or listen to podcasts.

Carla describes how the virtual format was helpful for her:

Carla: The benefit of having the class on Zoom was that we were able to practice that stuff at home. You wouldn't have been able to do that. It might have felt weird. If we had done it at the venue, we might not have gone home and figured out where were good spots to do stuff. You were practicing where you would do it anyway.

Moreover, accessibility of resources beyond the classes proved helpful for some:

Frances: Mindfulness tapes were useful—had them on my mobile phone so I can easily play them and listen.

However, some participants noted that they found the course too long with too much crossover of material with other antenatal classes. Leah and Isabel suggest that the courses could be achieved in less time:

Leah: I feel like I could have achieved what I got from it in a shorter time frame.

Isabel: He [partner] said, probably one day would have been just right.

Some preferred to have more breaks:

Carla: It would be handy to breaks during those 2 days as it was quite intense.

For others, it was about the timing of the course:

Anna: I gave birth nearly 2 months away. A little bit longer than 8 weeks. And I lost a bit of that confidence and traction during this period.

Area 3: Less Positive Experiences of Calmbirth. Although for many the strategies and tools were welcomed and acceptable, this was not the case for everyone.

Theme: Unwelcomed Material. Some reported feeling discomfort with some of the strategies and tools used. For example, there were mixed attitudes toward the use of media and written material.

Brie: There was one video they played that made me quite anxious to watch, so you could kind of hear the pain, she was in… just that noise kind of frightened me a bit... The book given at end; I did not use. Too long. Was not accessible, lots of writing. A summary would have been better.

Some participants also reported tools involving physical touch which were unhelpful and made them uncomfortable.

Hazel: That felt awkward, the massage bit, yeah cause that's not for everyone.

It is unclear from the data why Hazel felt this way about touch. Perhaps being touched in a public setting felt outside of Hazel's personal and cultural values, perhaps there were other issues for Hazel outside the remit of this evaluation. Likewise watching birthing videos caused anxiety for Brie and proved unhelpful. Although this sociocultural correlation is not certain, it indicates that educators of Calmbirth and other antenatal classes using massage techniques, media, and physical touch need to introduce these topics sensitively.

Theme: Feeling Unprepared. This theme relates to areas that what participants felt could have been covered further within the course, which

contributed to a sense of unpreparedness. Anna and Carla describe:

Anna: Breastfeeding and postbirth care would have been helpful. The surprise element came after the birth, not in terms of the birthing experience when you're giving birth, and you know… I was not focused on the breastfeeding, and I was not prepared for the feeling that your body feels immediately after birth, you know that pressure on your pelvic floor.

Carla: In the other antenatal class, they showed you how the cesarean surgery worked and how the room was laid out and that was quite impressive. Calmbirth could add that. If that did happen, and there were 30 people in the room, you would want to know who was doing what and why.

It is not possible to fully appreciate what caused the less positive reflections; perhaps they revealed unmet expectations, difficult group dynamics, or other sociocultural reasons. Subsequent childbirth experiences may also have colored what was narrated in the interviews. However, for some, like Anna, who despite feeling unprepared for the postnatal experience, reported learnings that had a long-lasting influence.

Anna: There's sort of some lifelong learnings that come out of the class that don't just finish with the birth.

Identifying these "less positive experiences," even those within single participant transcripts, helped refine our understanding of the multifaceted participant's experiences of Calmbirth. This provided opportunity to consider what is important to participants who did not fully enjoy all the course materials or approaches and informs service improvements through consideration of alternative perspectives and interpretations.

Overall, Calmbirth classes appear to contribute to improved satisfaction with the experience of childbirth, in terms of empowerment and a greater sense of control. Positively reframing experiences and lessening anxiety and fear related to childbirth appears to have positively influenced their childbirth experience by building confidence and self-efficacy.

DISCUSSION AND IMPLICATIONS

When examining the data through the psychoemotional conceptual framework, in particular the health literacy framework, there is evidence that acquisition of understanding new information in the courses was aligned with participants' cognitive and social skills across two of the three levels of health literacy, functionality, and interactively (Downer et al., 2020). Functionally, individuals were able to gather the information relevant in the Calmbirth classes to meet the needs of their own childbirth experience. Interactively, the information presented to them was often reflected upon and adapted to their own context and needs informing their childbirth decision-making. The increasing range of coping and cognitive-based strategies coupled with identifying and adapting their own coping styles and preferences was part of their growing health literacy. The ability to adapt to the changing context of their childbirth experiences was evident and reflects how effective and meaningful the Calmbirth content and process was for them. The learned strategies and tools helped positively reframe their experience and appears to have facilitated proactive decision-making. This reflects a greater sense of control, agency, and self-efficacy.

The importance of enhancing self-efficacy in the antenatal period has been previously established (Liyana Amin et al., 2018). This relates in particular to coping positively with pain (Smith et al., 2018), yet this effect on pain is still to be fully established in the childbirth context because findings remain mixed. An 8-week mindfulness program has been evaluated for perinatal mental health problems and found that such a program did reduce self-perceived stress and depression as well as increase self-efficacy in childbirth (Pan et al., 2019). The authors suggested that although their findings show some promise, future research is needed on the mechanisms involved.

Birth partner participation was a major theme in the analysis and highlighted the significance of the shared childbirth experience. Previous research has demonstrated a woman's self-efficacy and personalized decision-making can be augmented when care providers and birth partners understand a woman's unique coping behaviors and strategies (Warriner et al., 2018). This requires that birth partners as well as birth care providers be attuned to the individual needs of a laboring and birth woman. Birth partner involvement was clearly highlighted by participants as a positive aspect of the classes. A U.K. study has also demonstrated the effectiveness of a mindfulness-based childbirth education course for women and birth partners (Warriner et al., 2018). The significance of partner involvement in antenatal

classes has been shown, for example, in terms of increased empathy (Gün Kakaşçı et al., 2022) and the importance of educational approaches that focus on their needs (Smyth et al., 2015). Yet, there remains a paucity of studies focused on interventions that improve partner involvement, specifically related to maternal satisfaction and health outcomes (Xue et al., 2018).

The importance of delivery style of course information, strategies, and skills in the courses and the comportment of the facilitator were also highlighted. The educator's ability to comport mindfully and attune to the specific expectations of the group appeared to support the development of individual health literacy and empower participants. The value afforded to individual experiences and needs was welcomed. The style and content of the course were acceptable to those interviewed either in part or whole.

Overall, psycho-emotional coping increased in those interviewed; they reported feeling more empowered, mindful, and experienced development in self-efficacy and control through the childbirth process. For others, their main takeaway from the program was increased flexibility of their birth plan and a desire to go with the flow. While many went into the Calmbirth courses with various expectations, they reported an increased trust in the process, with an acceptance that interventions may be needed. Conversely, there were also women who did not appreciate some of the Calmbirth content and felt that it focused too narrowly on trying to achieve a natural birth without exploring the possibility of interventions such as cesarean surgery. These seemingly divergent experiences reveal the diversity in values, pre-existing beliefs, and learnings among the course participants and the impact that each of these have as they navigated the unpredictable nature of their own childbirth experience.

The third level of health literacy is criticality where participants would be in dialogue with local and perhaps national maternity systems and processes. Although there was some evidence of criticality, there was a paucity of questioning about the local maternity service provision in relation to their own needs. It has been suggested that improving health literacy across all three levels (e.g., functional, interactive, and critical) is essential in empowering antenatal education participants. Although Calmbirth courses were experienced as having an empowering influence on participants' childbirth in terms of the functional and interactive levels, the level of criticality of the wider cultural and societal issues related to their own experiences and the experience of others was not overtly evident. This may require a different focused style of examination. It is possible that through the shifting mindset and increased self-efficacy women and their partners could make decisions about their care which could lead to something more beyond their own needs.

The pilot courses were initiated by Auckland City Hospital because of concerns about increasing childbirth intervention rates. This evaluation was not about discovering causative mechanisms in relation to these interventions. It has been identified previously that there are powerful influences of maternity units, their practices, culture, and philosophy on childbirth (Crowther et al., 2021; Dahlen et al., 2021), and these may have a greater impact on choices than a set of learned antenatal strategies and tools. It is also unclear in this evaluation if the strategies and tools learned in the Calmbirth classes were consistently usable and welcomed into the birthing rooms of the maternity unit. Although the evaluation suggests that decision-making was positively influenced by women and their care providers, the impact on care providers in the hospital remains unclear. The balancing of maternity care provider influences with participant expectations may be an important theme for antenatal education and further work in this area is needed.

Although women in this study report greater confidence and more self-efficacy to choose the type of care they want, the reality may in fact be different in the intensity of the clinical areas. This correlates with published work focusing on attitudes, beliefs, and practices of maternity care providers and their influence on labor and birth care (Afshar et al., 2019; Maffi & Gouilhers, 2019). This suggests that any learnings, strategies, and tools gained through the course must also be understood by hospital staff who support them through the childbirth process if they are truly to make an impact on the experience of childbirth (Davies & Crowther, 2022; Tabib & Crowther, 2018). It could be construed that there may, in some instances, be a clash of cultures between the Calmbirth program and the hospital culture more broadly. Such a clash of cultural ideologies has been highlighted previously in the birthing space (Crowther et al., 2014, 2021; Lemay & Hastie,

2017; Parratt, 2008; Sackeim, 2019). To proactively address these concerns, a level of criticality and the willingness to be proactive and resist cultures and practices not congruent with one's wishes are required. However, such conflict is challenging and unwelcome in the birth space.

A recent international co-operative inquiry on birth culture reminds us how the influence of institutional, societal, and professional cultures cannot be underestimated (Crowther et al., 2021). Other studies concur and show how societal views, attitudes, risk perception, and fear culture surrounding and informing contemporary childbirth are prevalent (Coxon et al., 2018; Einion, 2017; Haines, 2020). Moreover, previous research has shown that women's choices are influenced by social context (McAra-Couper et al., 2012). For example, a Canadian study found that both sociostructural systems and cultural factors influence the mode of birth. This was particularly where childbirth practice in organizations may not conform to the women's and their families' needs and wishes (Behruzi et al., 2013).

Addressing the context both within Auckland City Hospital (where the evaluation took place) and the wider community is necessary to effect the sustainable transformative changes sought. Although influencing the wider societal cultural discourses around childbirth is not the remit of this evaluation, these considerations are important to acknowledge when a single intervention is introduced with the hope to reduce childbirth interventions—this requires a whole system approach. Moreover, generalized conclusions cannot be made that fit each individual woman and birth partner. Addressing individual, cultural, and ethnic preferences and expectations is also crucial for enhancing the health literacy effect of antenatal educational approaches. Furthermore, such classes need to be equitable in terms of financial cost, regional accessibility, and acceptability.

The findings of this evaluation cannot make any definite claims but do suggest a comprehensive approach to birth preparation including mindfulness, relaxation, and visualization strategies which *may* contribute to modifying childbirth interventions, outcomes, and even a change of culture. While this is encouraging, these can only be tentative associations, and it would be remiss to suggest that Calmbirth in and of itself significantly influences and impacts birthing cultures and childbirth outcomes. This evaluation focused on participants' experience of the course and its acceptability rather than outcomes. Although previous work (Shand et al., 2022) has demonstrated a trend toward higher rates of vaginal birth using psychoprophylaxis techniques in an Australian region, it remains unknown if this impact would be transferable to the Aotearoa NZ and other regions because of the differences in ethnicity, population spread, and models of maternity care provision.

The evaluation establishes the significance of providing antenatal education that proactively reframes childbirth by enhancing the psychosocial and emotional aspects of childbirth and meeting the information needs of prospective parents. This is consistent with the previous work that shows how attuning to and sustaining a helpful atmosphere, affirming space or mood during birth, nurtures comfort and helps improve the childbirth experience (Crowther et al., 2014). This requires an overt valuing of lived experiences of antenatal classes and subsequent childbirth journeys. Calmbirth classes privilege the lived experiences of participants, and aspects of the program's content appear, for the most part, to be evidence-based and safe, for example, mindfulness, relaxation, and information provision. However, further research needs to be done to provide empirical evidence to support the Calmbirth approach overall. Nevertheless, this evaluation provides insights into how the influence of the Calmbirth program for participants was experientially significant, and for many, this translated to having labor and birth experiences better than they anticipated.

CONCLUSION

Although this evaluation did not focus on measuring efficacy of the intervention, it does demonstrate how a program of antenatal education can impact positively on psychosocial and emotional well-being. Participants reported feeling more empowered and more confident and experienced a positive reframing of childbirth through the nurturing and supportive strategies that focused on psychosocial coping and emotional well-being which women and partners asserted transformed their experiences.

REFERENCES

Afshar, Y., Mei, J., Fahey, J., & Gregory, K. D. (2019). Birth plans and childbirth education: What are provider attitudes, beliefs, and practices? *Journal of*

Perinatal Education, *28*(1), 10–18. https://doi.org/10.1891/1058-1243.28.1.10

Behruzi, R., Hatem, M., Goulet, L., Fraser, W., & Misago, C. (2013). Understanding childbirth practices as an organizational cultural phenomenon: A conceptual framework. *BMC Pregnancy and Childbirth*, *13*(1), 1–10. https://doi.org/10.1186/1471-2393-13-205

Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology*, *12*(2), 202–222. https://doi.org/10.1080/14780887.2014.955224

Coxon, K., Scamell, M., & Alaszewski, A. (2018). *Risk, pregnancy and childbirth* (1st ed.). Taylor & Francis. https://books.google.co.nz/books?id=6ndyDwAAQBAJ

Crowther, S. A., Hall, J., Balabanoff, D., Baranowska, B., Kay, L., Menage, D., & Fry, J. (2021). Spirituality and childbirth: An international virtual co-operative inquiry. *Women and Birth*, *34*(2), e135–e145. https://doi.org/10.1016/j.wombi.2020.02.004

Crowther, S., Smythe, L., & Spence, D. (2014). Mood and birth experience. *Women and Birth*, *27*(1), 21–25. https://doi.org/10.1016/j.wombi.2013.02.004

Cutajar, L., Miu, M., Fleet, J.-A., Cyna, A. M., & Steen, M. (2020). Antenatal education for childbirth: Labour and birth. *European Journal of Midwifery*, *4*, 11. https://doi.org/10.18332/ejm/120002

Dahlen, H. G., Downe, S., Jackson, M., Priddis, H., de Jonge, A., & Schmied, V. (2021). An ethnographic study of the interaction between philosophy of childbirth and place of birth. *Women and Birth: Journal of the Australian College of Midwives*, *34*(6), e557–e566. https://doi.org/10.1016/j.wombi.2020.10.008

Davies, L., & Crowther, S. (2022). *Mindfulness in the birth sphere: Practice for pre-conception to the critical 1000 days and beyond*. Taylor & Francis. https://books.google.co.nz/books?id=CWWcEAAAQBAJ

Downer, T., McMurray, A., & Young, J. (2020). The role of antenatal education in promoting maternal and family health literacy. *International Journal of Childbirth*, *10*(1), 52–64. https://doi.org/10.1891/IJCBIRTH-D-20-00012

Einion, A. (2017). The medicalisation of childbirth. In *The social context of birth* (pp. 169–180). Routledge. https://doi.org/10.1201/9781315378077-11

Escott, D., Slade, P., & Spiby, H. (2009). Preparation for pain management during childbirth: The psychological aspects of coping strategy development in antenatal education. *Clinical Psychology Review*, *29*(7), 617–622. https://doi.org/10.1016/j.cpr.2009.07.002

Fairbrother, N., Collardeau, F., Albert, A., & Stoll, K. (2022). Screening for perinatal anxiety using the childbirth fear questionnaire: A new measure of fear of childbirth. *International Journal of Environmental Research and Public Health*, *19*(4), 2223. https://doi.org/10.3390/ijerph19042223

Gün Kakaşçı, Ç., Coşkuner Potur, D., Karabulut, Ö., Ertuğrul Abbasoğlu, D., Demirci, N., & Doğan Merih, Y. (2022). Does antenatal education affect level of empathy and attachment of fathers? *Journal of Reproductive and Infant Psychology*, *40*(4), 366–383. https://doi.org/10.1080/02646838.2021.1979198

Haines, H. (2020). Global perspectives of childbirth fear including the relevant evidence. In *Understanding anxiety, worry and fear in childbearing* (pp. 19–29). Springer. https://doi.org/10.1007/978-3-030-21063-2_2

Hong, K., Hwang, H., Han, H., Chae, J., Choi, J., Jeong, Y., Lee, J., & Lee, K. J. (2021). Perspectives on antenatal education associated with pregnancy outcomes: Systematic review and meta-analysis. *Women and Birth*, *34*(3), 219–230. https://doi.org/10.1016/j.wombi.2020.04.002

Lemay, C., & Hastie, C. J. (2017). Holding sacred space in labour and birth. In S. Crowther & J. Hall (Eds.), *Spirituality childbirth: Meaning care at the start of life* (1st ed.). Taylor & Francis Group.

Levett, K. M., Dahlen, H. G., Smith, C. A., Finlayson, K. W., Downe, S., & Girosi, F. (2018). Cost analysis of the CTLB study, a multitherapy antenatal education programme to reduce routine interventions in labour. *BMJ Open*, *8*(2), e017333. https://doi.org/10.1136/bmjopen-2017-017333

Liyana Amin, N. A., Tam, W. W. S., & Shorey, S. (2018). Enhancing first-time parents' self-efficacy: A systematic review and meta-analysis of universal parent education interventions' efficacy. *International Journal of Nursing Studies*, *82*, 149–162. https://doi.org/10.1016/j.ijnurstu.2018.03.021

Maffi, I., & Gouilhers, S. (2019). Conceiving of risk in childbirth: Obstetric discourses, medical management and cultural expectations in Switzerland and Jordan. *Health, Risk & Society*, *21*(3–4), 185–206. https://doi.org/10.1080/13698575.2019.1621996

McAra-Couper, J., Jones, M., & Smythe, L. (2012). Caesarean-section, my body, my choice: The construction of 'informed choice' in relation to intervention in childbirth. *Feminism & Psychology*, *22*(1), 81–97. https://doi.org/10.1177/0959353511424369

Miller, S., Abalos, E., Chamillard, M., Ciapponi, A., Colaci, D., Comandé, D., Diaz, V., Geller, S., Hanson, C., Langer, A., Manuelli, V., Millar, K., Morhason-Bello, I., Castro, C. P., Pileggi, V. N., Robinson, N., Skaer, M., Souza, J. P., Vogel, J. P., & Althabe, F. (2016). Beyond too little, too late and too much, too soon: A pathway towards evidence-based, respectful maternity care worldwide. *Lancet*, *388*(10056), 2176–2192. https://doi.org/10.1016/S0140-6736(16)31472-6

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, *15*(3), 259–267. https://doi.org/10.1093/heapro/15.3.259

O'Connell, M. A., Khashan, A. S., & Leahy-Warren, P. (2021). Women's experiences of interventions for fear of childbirth in the perinatal period: A meta-synthesis of qualitative research evidence. *Women and Birth*, *34*(3), e309–e321. https://doi.org/10.1016/j.wombi.2020.05.008

Pan, W.-L., Gau, M.-L., Lee, T.-Y., Jou, H.-J., Liu, C.-Y., & Wen, T.-K. (2019). Mindfulness-based programme on the psychological health of pregnant women. *Women and Birth*, *32*(1), e102–e109. https://doi.org/10.1016/j.wombi.2018.04.018

Parratt, J. (2008). Territories of the self and spiritual practices during childbirth. In *Birth territory and midwifery guardianship: Theory for practice, education and research* (pp. 39–54). Butterworth Heinemann Elsevier.

Ravitch, S. M., & Riggan, M. (2016). *Reason & rigor: How conceptual frameworks guide research*. Sage.

Rúger-Navarrete, A., Vázquez-Lara, J. M., Antúnez-Calvente, I., Rodríguez-Díaz, L., Riesco-González, F. J., Palomo-Gómez, R., Gómez-Salgado, J., & Fernández-Carrasco, F. J. (2023). Antenatal fear of childbirth as a risk factor for a bad childbirth experience. *Healthcare*, *11*(3), 297. https://doi.org/10.3390/healthcare11030297

Sackeim, M. G. (2019). The (Im)perfection of childbirth. *Obstetrics and Gynecology*, *133*(3), 575–576. https://doi.org/10.1097/AOG.0000000000003116

Saxbe, D., Horton, K. T., & Tsai, A. B. (2018). The birth experiences questionnaire: A brief measure assessing psychosocial dimensions of childbirth. *Journal of Family Psychology*, *32*(2), 262–268. https://doi.org/10.1037/fam0000365

Seijmonsbergen-Schermers, A. E., van den Akker, T., Rydahl, E., Beeckman, K., Bogaerts, A., Binfa, L., Frith, L., Gross, M. M., Misselwitz, B., Hálfdánsdóttir, B., Daly, D., Corcoran, P., Calleja-Agius, J., Calleja, N., Gatt, M., Vika Nilsen, A. B., Declercq, E., Gissler, M., Heino, A., … de Jonge, A. (2020). Variations in use of childbirth interventions in 13 high-income countries: A multinational cross-sectional study. *PLOS Medicine*, *17*(5), e1003103. https://doi.org/10.1371/journal.pmed.1003103

Shand, A. W., Lewis-Jones, B., Nielsen, T., Svensson, J., Lainchbury, A., Henry, A., & Nassar, N. (2022). Birth outcomes by type of attendance at antenatal education: An observational study. *Australian & New Zealand Journal of Obstetrics & Gynaecology*, *62*(6), 859–867. https://doi.org/10.1111/ajo.13541

Smith, C. A., Levett, K. M., Collins, C. T., Armour, M., Dahlen, H. G., & Suganuma, M. (2018). Relaxation techniques for pain management in labour. *Cochrane Database of Systematic Reviews*, *3*(3), CD009514. https://doi.org/10.1002/14651858.CD009514.pub2

Smyth, S., Spence, D., & Murray, K. (2015). Does antenatal education prepare fathers for their role as birth partners and for parenthood? *British Journal of Midwifery*, *23*(5), 336–342. https://doi.org/10.12968/bjom.2015.23.5.336

Striebich, S., Mattern, E., & Ayerle, G. M. (2018). Support for pregnant women identified with fear of childbirth (FOC)/tokophobia – A systematic review of approaches and interventions. *Midwifery*, *61*, 97–115. https://doi.org/10.1016/j.midw.2018.02.013

Tabib, M., & Crowther, S. (2018). Service evaluation of relaxation workshops for pregnant women. *Journal of Perinatal Education*, *27*(1), 10–19. https://doi.org%20/10.1891/1058-1243.27.1.10

Warriner, S., Crane, C., Dymond, M., & Krusche, A. (2018). An evaluation of mindfulness-based childbirth and parenting courses for pregnant women and prospective fathers/partners within the UK NHS (MBCP–4–NHS). *Midwifery*, *64*, 1–10. https://doi.org/10.1016/j.midw.2018.05.004

Xue, W. L., Shorey, S., Wang, W., & He, H.-G. (2018). Fathers' involvement during pregnancy and childbirth: An integrative literature review. *Midwifery*, *62*, 135–145. https://doi.org/10.1016/j.midw.2018.04.013

ETHICAL APPROVAL

Ethics approval was obtained from Auckland University of Technology Ethics Committee (AUTEC) (20/323) on December 11, 2020. There are no competing interests.

DISCLOSURE

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