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Women's birthplace decision-making, the role of confidence: Part of the Evaluating Maternity Units study, New Zealand

Celia P. Grigg, BA, BMid, MMid, RM (PhD Candidate)[a,c,*], Sally K. Tracy, DMID, MA, RGON, RM (Professor of midwifery)[b,c], Virginia Schmied, PhD, BA, RM, RN (Professor in maternal and infant health)[d], Rea Daellenbach, PhD (Senior lecturer)[e], Mary Kensington, MPH, BA, DipTchg, (Tertiary), RCGON, RM, ADM (Co-head)[e]

[a] Midwifery and Women's Health Research Unit, Faculty of Nursing and Midwifery, 88 Mallett St., The University of Sydney, Sydney 2050, NSW, Australia
[b] Centre for Midwifery & Women's Health Research Unit, The Royal Hospital for Women, Sydney, NSW, Australia
[c] University of Sydney, NSW, Australia
[d] School of nursing and midwifery, Family and Community Health Research Group, University of Western Sydney, NSW, Australia
[e] School of Midwifery, Christchurch Polytechnic Institute of Technology, New Zealand

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ABSTRACT

Objective: to explore women's birthplace decision-making and identify the factors which enable women to plan to give birth in a freestanding midwifery-led primary level maternity unit rather than in an obstetric-led tertiary level maternity hospital in New Zealand.
Design: a mixed methods prospective cohort design.
Methods: data from eight focus groups (37 women) and a six week postpartum survey (571 women, 82%) were analysed using thematic analysis and descriptive statistics. The qualitative data from the focus groups and survey were the primary data sources and were integrated at the analysis stage; and the secondary qualitative and quantitative data were integrated at the interpretation stage.
Setting: Christchurch, New Zealand, with one tertiary maternity hospital and four primary level maternity units (2010–2012).
Participants: well (at 'low risk' of developing complications), pregnant women booked to give birth in one of the primary units or the tertiary hospital. All women received midwifery continuity of care, regardless of their intended or actual birthplace.
Findings: five core themes were identified: the birth process, women's self-belief in their ability to give birth, midwives, the health system and birth place. 'Confidence' was identified as the overarching concept influencing the themes. Women who chose to give birth in a primary maternity unit appeared to differ markedly in their beliefs regarding their optimal birthplace compared to women who chose to give birth in a tertiary maternity hospital. The women who planned a primary maternity unit birth expressed confidence in the birth process, their ability to give birth, their midwife, the maternity system and/or the primary unit itself. The women planning to give birth in a tertiary hospital did not express confidence in the birth process, their ability to give birth, the system for transfers and/or the primary unit as a birthplace, although they did express confidence in their midwife.
Key conclusions and implications for practice: birthplace is a profoundly important aspect of women's experience of childbirth. Birthplace decision-making is complex, in common with many other aspects of childbirth. A multiplicity of factors needs converge in order for all those involved to gain the confidence required to plan what, in this context, might be considered a 'countercultural' decision to give birth at a midwife-led primary maternity unit.

* Corresponding author. *Permanent address*: PO Box 33 268, Barrington, Christchurch 8244, New Zealand.
E-mail addresses: celia.grigg@sydney.edu.au (C.P. Grigg), sallytracy@sydney.edu.au (S.K. Tracy), V.Schmied@uws.edu.au (V. Schmied), Rea.Daellenbach@cpit.ac.nz (R. Daellenbach), Mary.Kensington@cpit.ac.nz (M. Kensington).

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Introduction

Birthplace is a profoundly important aspect of childbearing, and has powerful socio-cultural implications in some cultures (Kildea, 2006; Kornelsen et al., 2010). Birthplace decision-making occurs in, and is strongly influenced by, the social, cultural and political context within which women and their families live. The primary consideration for women in birthplace decision-making is the safety of themselves and their baby (Smythe, 1998; McAra-Couper, 2007; Regan and McElroy, 2013; Grigg et al., 2014; Murray-Davis et al., 2014). 'Everyone wants to be safe. Everyone believes in their own understandings of what is safe' (Smythe, 1998). As women living in the same context 'choose' different birthplaces, caregivers and birth types, women clearly have different ways of achieving this sense of safety (Bryant et al., 2007; Lindgren et al., 2010; Miller and Shriver, 2012; Chadwick and Foster, 2014). Arguably the current dominant discourse is that hospital is the 'safest' place to give birth (Cherniak and Fisher, 2008; Bryers and van Teijlingen, 2010; Miller and Shriver, 2012; Coxon et al., 2013). Safety is closely linked to the powerful construct of risk, which has been extensively written about in relation to birth (Lippman, 1999; Possamai-Inesedy, 2006; Jordan and Murphy, 2009; McIntyre et al., 2011; Smith et al., 2012; Coxon et al., 2013; Chadwick and Foster, 2014). The notion of 'choice' has been previously identified as a complex concept which is constructed, defined and confined by the existing social context and culture (Lippman, 1999; Edwards, 2004; McAra-Couper et al., 2011; Hadjigeorgiou et al., 2012). These three complex constructs of safety, risk and choice are central to women's decision-making surrounding birth, but elaboration on them is beyond the scope of this paper. Suffice to say that it is widely held that obstetrics, espousing the technocratic model, currently holds the 'authoritative knowledge' on childbirth, has the power to define 'safety' and 'acceptable risk', controls the information women receive and also the 'choices' available to women (Jordan, 1997; Edwards and Murphy-Lawless, 2006; Jordan and Murphy, 2009; Bryers and van Teijlingen, 2010; Davis and Walker, 2013).

Birthplace decision-making has considerable complexity surrounding it and can have far-reaching implications for women, their families and communities, as well as for healthcare and facility funders and providers. Women's beliefs and values regarding birth are often deeply held, and are influenced by a wide range of factors including their personal experiences of birth and those of their family and friends, the beliefs and values of their partner and sometimes those of their family and friends, and their knowledge-base (Coxon et al., 2013; Noseworthy et al., 2013). The wider socio-cultural context is also influential; it includes the organisation of maternity care, the local maternity facilities and their reputation, the local 'birth' and 'risk' cultures, the dominance of obstetrics, the status and ideology of local midwifery, and what is considered the 'norm' in their community (Davis-Floyd, 1994; Levy, 1999; Kirkham, 2004; Edwards and Murphy-Lawless, 2006; Cherniak and Fisher, 2008; Bryers and van Teijlingen, 2010; Noseworthy et al., 2013).

The focus of existing research on birthplace decision-making between PMU and TMH to date has been on the influential people and factors (Lavender and Chapple, 2005; Barber et al., 2006; Zelek et al., 2007; Houghton et al., 2008; Pitchforth et al., 2009; Rogers et al., 2011; Grigg et al., 2014). The influence of the physical attributes of maternity units and care provided in them on decision-making have also been studied (Fahy et al., 2008; Thompson and Wojcieszek, 2012; Hammond et al., 2013). Research seeking to identify enabling factors or underlying belief systems which drive women's decision-making has more commonly studied women intending to give birth at home than in primary units (Murray-Davis et al., 2012; Chadwick and Foster, 2014; Catling et al., 2014). An exception is the Coxon et al. (2013) study, which included women planning the widest range of birthplaces: home birth, alongside and freestanding (primary level) maternity units and obstetric (tertiary level) hospital. As women planning home births are actively planning a birth away from a hospital setting they may have beliefs similar to women planning a primary unit birth, and are therefore relevant to this study.

This paper reports on the Evaluating Maternity Units (EMU) study which is the New Zealand arm of an Australasian prospective cohort study. The primary aim of the overall study is to compare the clinical outcomes for well ('low risk') women, intending to give birth in either an obstetric-led tertiary level maternity hospital (TMH) or a free-standing midwifery-led primary level maternity unit (PMU) in Australia or New Zealand. The Australian clinical outcomes have been reported previously (Monk et al., 2014). The New Zealand clinical outcomes will be reported in a separate paper. The New Zealand arm of the study is a mixed methods design and one of its aims is to describe and explore women's birthplace decision-making. This is the second article based on data from New Zealand. The first article identified the level of influence various factors and people had on participants, and the rationale given for their birthplace decision (Grigg et al., 2014). In summary, it reported that women who chose a tertiary hospital were found to almost exclusively choose it for its specialist services/facilities. In contrast, most of the women who planned to give birth in a primary unit gave several reasons that included closeness to home, ease of access, avoidance of early postnatal transfer, and the atmosphere or feel of the unit. Almost all of the respondents appeared to consciously and actively choose their birthplace, and identified themselves as the main birthplace decision-maker. The women who planned a TMH birth appeared to hold to the core tenets of the 'technocratic'/'medical' model of childbirth, and those who planned a PMU birth reflected the 'holistic'/'midwifery' model, despite all of the women living in the same socio-political and cultural context (Grigg et al., 2014) (see comparative table of models in online supplementary material).

New Zealand's maternity system is unique. It has women-centred continuity of care as a core tenet (Ministry of Health, 2007). Women choose their own community based 'lead maternity carer' (LMC) who provides care throughout her maternity experience – antenatal, labour/birth and six week postpartum. Most LMCs are midwives (Ministry of Health, 2011). The midwife generally remains caregiver, even if complications arise requiring obstetric consultation and a change of plan antenatally or a transfer between facilities during labour and birth. (For a comprehensive description of New Zealand's maternity system see (Grigg and Tracy, 2013).) Most women (85%) give birth in one of the 18 secondary or six tertiary hospitals, with specialist obstetric, anaesthetic and paediatric services onsite (Ministry of Health, 2012). The 57 primary maternity units or free-standing birth centres are staffed by midwives and have no specialist services onsite.

This is the second article from the New Zealand EMU study addressing the topic of birthplace decision-making, it uses a different lens to view the qualitative data and provides more in depth analysis to identify underlying drivers of birthplace decisions. It aims to explore the factors which enable women to plan to give birth in a primary maternity unit in New Zealand, which has not been addressed in the literature to date.

Methods

A mixed method methodology was chosen for the New Zealand EMU study, as the best way to address the complexity of issues around birthplace and give voice to women's experiences, thoughts and beliefs. It was grounded in a pragmatic approach (Johnson and Onwuegbuzie, 2004; Morgan, 2007; Denscombe, 2008) and utilised

a 'concurrent QUANTITATIVE+qualitative' typology (Teddlie and Tashakkori, 2006; Leech and Onwuegbuzie, 2009). Mixed methods research uses capital letters to indicate the dominant data source, and the abbreviations of 'quan' representing quantitative data and 'qual' depicting qualitative data. Three types of data were collected in the New Zealand EMU study: the core clinical outcome and transfer data (quan), survey data (quan+qual) and focus group data (qual). The focus groups (QUAL) provided the primary data for this article, supplemented by the six week postpartum survey data, which has both qualitative 'open text' questions (qual) and quantitative 'closed' questions (quan) data. The qualitative data from both sources were integrated at the analysis stage, and all data were integrated at the interpretation stage and triangulated to assess congruence and complementarity. Qualitative data were analysed using thematic analysis (Braun and Clarke, 2006), and the quantitative data were analysed using descriptive statistics. Ethics approval was granted by the Upper South B Regional Ethics Committee (URB/09/12/063).

The study was set in the Christchurch area, in Canterbury. Christchurch is the country's second largest city, with 350,000 inhabitants. There is a tertiary maternity hospital and four primary maternity units in the area. Two of the PMUs are located semi-rurally outside the city boundaries and the two urban units operate independently as stand-alone primary maternity units, although they are based within hospitals which do not offer acute or specialist maternity services.

Participants

All women booked to give birth in a primary maternity unit were invited to participate, and those who joined comprised the PMU cohort. Women who booked into the tertiary hospital and were well pregnant women (at 'low risk' of pregnancy complications), based on information on the hospital booking form, were invited and those who joined comprised the TMH cohort. (The hospital booking forms were the means of identifying eligible women.) For the purposes of this study, 'low risk' was defined as not having any level two or three referral criteria as defined in the New Zealand Referral Guidelines (Ministry of Health, 2007). For example, women with pre-existing diabetes or who were expecting twins were ineligible. Eligible women who registered with local midwives were invited to participate. Recruitment was undertaken by the lead author. Eligible women were sent a postal invitation to join the study, with a follow-up phone call to those who did not respond. Additionally, some women were invited by their midwife. Consent to join the study included consent to receive two surveys, one six weeks and another at six months postpartum. Women were notified of the focus groups in the initial study invitation and invited to join with the six week survey, as an optional extra (with separate consent). The focus groups were therefore a self-selected subgroup of the study participants. Recruitment began in March 2010, was suspended for one month after a major earthquake in September 2010, and stopped prematurely after a subsequent severe earthquake in February 2011. Following the February earthquake all the study sites were temporarily disrupted, due to damage of roads, sanitation and water services, and one of the primary units was permanently closed due to safety concerns, and the building was subsequently demolished. Participants' births occurred between March 2010 and August 2011. Of the 2310 women sent invitations 30% joined the study. A total of 702 women joined the study (295 into TMH cohort and 407 into PMU cohort) based on their intended birthplace at the time they joined (any time before labour).

Data collection

The eight focus groups were held in local community facilities and women attended groups according to their intended birthplace type (primary or tertiary). The sessions lasted sixty to ninety minutes. Two researchers, who were not known to the participants (a sociologist, and one of two midwives), co-facilitated each group. Most groups had 4–6 participants (37 in total). The groups were based on a semi-structured format with eight broad questions used as a cue sheet to guide the discussion (see online supplementary material). Of the eight focus groups, four were held in November 2010 and four in March 2012. The latter groups were delayed as a result of the earthquakes, consequently the women were between four and 17 months postpartum when they attended a focus group. The focus groups were audio-recorded and independently transcribed, with the transcriptions reviewed by two researchers before analysis.

The six week postpartum survey was sent via post or online, as chosen by participants. It comprised nine pages and 51 questions, some of which had multiple sub-questions. The majority of questions were 'closed' (tick box or Likert scale), with 13 questions open ended and nine of those sought explanatory or descriptive detail. Please see Grigg et al. (2014) for further details on the six week survey and its construction. Both the survey and focus groups addressed the issue of birthplace decision-making.

Data analysis

The qualitative data (from the focus group and open ended survey responses) were manually reviewed and inductively grouped and coded, with categories and subsequently themes identified, using thematic analysis (Braun and Clarke, 2006). Thematic analysis involves the examination of commonalities, relationships and differences across the dataset and reports identified patterns as themes (Gibson and Brown, 2009). The coding and interpretation was checked collaboratively for consistency by the three researchers who participated in the focus groups. An audit trail was kept linking the raw data and themes. The numerical 'study code' identifier is used for quotes. The quantitative data were analysed using SPSS software (Version 20), and NVivo software (version 10.0) was used to manage the qualitative data from both surveys and focus groups.

Findings

There were some differences in the demographics of the study's survey respondents. The TMH survey respondents were statistically significantly more likely to be having their first baby ($p=0.001$) and have a higher income than the PMU respondents ($p=0.001$). The PMU women also tended to be younger, less well educated, lower income and more were Māori, whereas the TMH women tended to be better educated and older (Table 1).

Of the 37 focus group participants 24 women had intended to give birth in the PMU, six of those were first time mothers and five women had given birth to their first baby in a TMH previously. Of the 13 TMH group women five were first time mothers. Two of the PMU group had unplanned home births and five gave birth at the tertiary hospital after antenatal or (pre-admission) labour change of plan.

Six week postpartum surveys were sent to 692 women with 571 returned, a response rate of 82% (80% PMU, 82% TMH). The TMH was the original planned birthplace for 234 (41%) respondents, one of the four PMUs for 332 (58%) and 'other' for $<1\%$ of respondents (home (3), home/TMH (1), home/PMU (1)). A small number of participants had changed their intended birthplace by the time they joined the study (4%). The qualitative data from the focus groups and surveys are integrated in the analysis and reported together.

Five core themes were identified: process, self, midwife, system and place. 'Confidence' was identified as the overarching concept

influencing the themes. Amongst women who decided to give birth in a primary unit confidence in these five factors was identified as important. Women need confidence in 'P-S-M-S-P':

1. Process – the process of birth
2. Self – their ability to give birth
3. Midwife – their midwife
4. System – the health system, for transfer and access to specialist facilities/staff
5. Place – the intended birthplace itself.

1. Confidence in: P – Process – the process of birth

The PMU cohort expressed an inherent confidence in the birth process, without it necessarily being the explicitly expressed in their responses, as illustrated in Table 2. They believed that, if they and their baby are well in early spontaneous labour, birth is highly likely to proceed normally, without complications. In contrast the women who planned a tertiary hospital birth expressed a lack of confidence in the process of birth, and perceived it as having a very real potential to 'go wrong' seriously and unpredictably (Table 2).

Table 1
Survey respondents' demographics.

Demographic	PMU (%) $n=330$	TMH (%) $n=228$	*P*-value (χ^2 95%CI)
Parity			
0	41.6	53.3	.001
1	36.7	37.0	
2–4	20.9	9.3	
≥5	0.9	0.4	
Age			
<25	11.3	7.3	.083
25–29	33.2	25.6	
30–34	40.9	48.3	
35–39	12.8	15.8	
≥40	1.5	3.0	
Ethnicity			
NZ European	76.0	78.2	.365
Māori	5.6	2.6	
Other	18.1	18.8	
Partner			
Yes	91.6	91.1	.748
No	7.6	8.2	
Education			
No post-school completed	20.2	15.7	.335
Apprenticeship, certificate	16.6	13.9	
Diploma	16.9	17.8	
Degree	46.2	52.6	
Income			
<$25,000 pa before tax	6.1	6.2	.001
$25,001–$50,000	29.1	15.0	
$50,001–$75,000	30.4	31.0	
>NZ$75,000	34.4	47.8	

2. Confidence in: S – Self – their ability to give birth.

The participants from the PMU group generally expressed confidence in their ability to give birth, see Table 3. It illustrated a belief in their body's capacity to labour and give birth 'under their own steam'. In contrast, most of the women from the TMH group did not express self-confidence or expressed a lack of it, although a very small number did express self-confidence regarding their ability to give birth (see final quote from TMH group in Table 3).

The survey asked two closed questions about 'confidence' and the responses were difficult to interpret. One Likert scale question asked women about the overall importance to their labour/birth experience of '*having confidence in my ability to give birth*' (response options – 'strongly agree', 'agree', 'unsure', 'disagree', 'strongly disagree'). Responses from both groups were very similar, with 95% of the PMU group and 92% of the TMH group 'agreeing' or 'strongly agreeing' with the statement. Taken in isolation the response to one question in the survey suggests that almost all of the women in the study had confidence in their ability to give birth. However, responses to another Likert scale question in the survey indicated that women in the TMH group generally did not feel as confident as those in the PMU group prior to labour, see Table 4. The question asked about the woman's feelings of excitement, anxiety, confidence and fear '*when they thought about labour before they had their baby*' (response options – 'never', 'sometimes', 'often' or 'always'). Confidence was the only aspect in which their results were significantly different, with the PMU group expressing more confidence. While there was a tendency for the PMU women to report feeling excited more often and less anxious, the differences between the groups were not statistically significant. The response regarding their level of fear was almost the same.

Focus group discussion revealed that the self-confidence of some women from the PMU group was undermined by women's partners, or others of influence, not having confidence in them, see Table 5.

3. Confidence in: M – Midwife – their midwife.

The EMU study found that women in *both* the PMU and TMH groups had confidence in their midwives (LMCs). This confidence was expressed by those in both focus group participants and survey respondents, see Table 6.

The TMH women seemed to have confidence in their midwives, but focus group discussion indicated that this was not enough for them to accept their midwife's recommendation to go to a PMU. For example,

Table 2
Exemplars of data coded in theme of 'Process'.

Planned Primary Maternity Unit (PMU)	Planned Tertiary Maternity Hospital (TMH)
'I think [TMH] – it's a hospital, which if you are sick or if you've had an accident, that's great, that's exactly what you want; but I wasn't sick, I was having a baby – it's a perfectly natural process that millions of women all around the world have managed to do without nice shiny hospitals' (PMU Focus Group, 3009).	'it is the most riskiest thing a woman can do and the only reason you have such a good survival rate of infants now and their mothers is because of that intervention. I don't know why people make such an issue about it. It really is terrible. When in effect it's natural selection' (TMH Focus Group, 3492).
'I wanted to keep my birth as natural as possible, I didn't want it to be medicalised and so that's why I kind of thought the birthing unit was the good kind of middle ground' (PMU Focus Group, 4042)	'certainly for your first I would recommend [TMH] because like I said before you don't know what's going to happen, you haven't birthed before and even though you are a healthy young woman things do happen' (TMH Focus Group, 3504)
'I wanted to be in a space that meant the least possible intervention – if epidurals were not available then I was less likely to be asked for one, etc. I wanted to labour as naturally as possible whilst not wishing to have a homebirth – I felt being in a hospital would lead to too much medical intervention.' (PMU, Survey, 3037)	'I am a qualified paramedic, as is... we have seen enough examples of births gone wrong in our work to ensure we wanted our birth to be in a high level of specialist care' (TMH Survey, 3269)

Table 3
Exemplars of data coded in theme of 'Self'.

Planned Primary Maternity Unit (PMU)	Planned Tertiary Maternity Hospital (TMH)
'You get more relaxed as you go, the more you have (laughter) I think you trust yourself more' (PMU Focus Group, 3023).	'I always knew I would go there, because I'm very paranoid and anxious' (TMH Focus Group, 3073).
'The first one started out not looking so good, so it ended up, I ended up feeling really good about it… because of that I felt confident, like I was able to do it' (PMU Focus Group, 3027)	'I wanted to go to [TMH] particularly being the first pregnancy and I hadn't been in hospital before with any illness or anything, so I didn't know about allergies or how I would really cope' (TMH Focus Group, 3504)
'My midwife gave me the confidence and courage to really believe that my body would know what to do when the time was right' (PMU Survey, 5012)	Confidence in self expressed: 'And then for this one I felt more in control of what I knew my body could do and actually I could have birthed anywhere' (TMH Focus Group, 4083)

Table 4
Survey responses to Likert scale question on women's feelings about labour.

Feeling 'when they thought about labour before they had their baby'	***PMU* (%)**	***TMH* (%)**	***p*-Value (χ^2 95%CI)**
Excitement – 'often' or 'always'	60	49	0.06
Anxiety – 'never' or 'sometimes'	71	64	0.27
Confidence – 'often' or 'always'	60	40	< 0.001
Fear – 'never' or 'sometimes'	76	77	0.34

'*My midwife tried to convince me to go elsewhere and I just wouldn't*' (Ana). They understood that it was their midwives who assessed and called for specialist assistance in the hospital context, and had confidence that they would do this appropriately (see second TMH quote, Table 6).

4. Confidence in: S – System – the health system.

The 'health system' in this context refers to the organisational processes for specialist consultation and transfer to specialist facilities, and timely access to appropriate resources (e.g. ambulance) for transfer. In the EMU study, the women in the group who planned a PMU birth expressed confidence in the system, see Table 7. In contrast, the women planning a TMH birth expressed a lack of confidence in the system to provide timely transfer (Table 7). Confidence in the system of referral and midwives' access to specialist services and facilities if needed was implicit in the responses from both groups.

5. Confidence in: P – Place – the birthplace.

The EMU study found that many of the women planning a PMU birth expressed confidence in the place itself, including its staff/midwives and facilities, see Table 8. In contrast, the vast majority of TMH group chose the TMH because of the specialist facilities and services available (95% of survey respondents). They only had confidence in the TMH (Table 8). Some of the PMU group had gained confidence in the primary unit after being there for postnatal care following a first birth at the tertiary unit, as illustrated in the second PMU quote, Table 8.

One of the survey's (Likert scale) questions asked women about the overall importance to their labour/birth experience of '*being in a place I felt safe*' (response options - 'strongly agree', 'agree', 'unsure', 'disagree', 'strongly disagree'). Responses from both groups were almost identical, with 98% of the PMU group and 97% of the TMH group choosing 'agree' or 'strongly agree'; with > 70% of both groups strongly agreeing with the statement.

Confidence gained from first birth

For many of the PMU group women having previously had a normal birth (often at the tertiary hospital) was influential in their plan to give birth at the PMU for a subsequent birth – it had given them confidence in both the process and in their ability to give birth. Most had also stayed at the primary unit postnatally previously, which had given them confidence in the place and its staff – see quote 1, Table 9. We also found that confidence was not just gained from a 'normal' or positive birth experience. Further analysis found that many of the women who had gained confidence following an earlier birth had experienced complications or transfer previously – see quote 2, Table 9.

Discussion

'Confidence' was identified as the overarching concept influencing the five core themes identified for birthplace decision-making for the women in the EMU study. The emotion or feeling of confidence itself is not often addressed in the literature (Barbalet, 1993; Luhmann, 2000). Confidence is a positive or affirmative emotion. Defining it involves contrasting it with its opposites of what Darwin called 'emotions of low spirits' – including anxiety, dejection, shame and shyness (Barbalet, 1993). It is 'self-referenced', with the level of confidence dependent on the person concerned, whether it is in relation to themselves (self-confidence) or to how they perceive other people or things. Sociologist Barbalet (1996) describes confidence as an emotion of 'assured expectation' and 'self-projection', it is 'not only the basis of but a positive encouragement to action' (p. 76); it is 'the feeling which encourages one to go one's own way' (Barbalet, 1996). Its role in facilitating action makes it one of the key enablers. Edwards and Murphy-Lawless (2006) identify it as such for childbearing women: '*It seems that safety and autonomy can best be nurtured by increasing women's health and confidence, reducing fear, providing social support, improving holistic midwifery skills, and providing high quality, accessible obstetric services that women and midwives can engage with if and when they need it*' (p. 46). We found that the women in the EMU study who planned a primary unit birth expressed greater levels of confidence in most of the five core themes identified – process, self, midwife, system, place – than those who planned a tertiary hospital birth.

1. Process

Arguably, women who believe that pregnancy is a normal physiological, social and cultural process and inherently healthy, are more likely to have confidence in the birth process. Holding this belief is a core tenet of 'holistic' model of birth. In common with the current study's findings previous research has reported that belief, or lack of belief, in the process of birth influences birthplace decision-making (Coxon et al., 2013; Regan and McElroy, 2013; Catling et al., 2014). For example, women interested in birth centre or home birth have been found to have a strong focus on childbirth as a social and natural event (Neuhaus et al., 2002; Hildingsson et al., 2003; Catling et al., 2014; Murray-Davis et al., 2014). In contrast, this study found the women who planned hospital births did so almost exclusively for its specialist services/facilities – 95% of TMH survey respondents (Grigg et al., 2014). This rationale appeared to express a strong lack of confidence in the birth

Table 5
Exemplars of data coded as 'confidence undermined by others'.

Planned Primary Maternity Unit (PMU)	PMU group, Antenatal Plan Change to Tertiary Maternity Hospital (TMH)
Confidence undermined by partner resulting in first birth at TMH. Second birth at PMU, having gained self-confidence.	Confidence undermined by GP, during visit with a sick child, resulting in changed birthplace plans for her third birth.
'my husband thought that I had a pretty low pain threshold, which I just kind of thought 'maybe I'm not going to cope, so I think I need the options', so I arrived at [TMH] and I was there for an hour, gave birth and left... Once I realised in my head that I could actually do it, and once I believed in myself, it was kind of like a light bulb, and I just felt this is what I want to do, and I don't need to be in hospital necessarily to give birth' (PMU Focus Group, 3286).	'And [my GP] was like (my babies have been big, my first was 11lb5 and my second was 10lb8) and she was like 'big babies, I wouldn't be so brave'. And it just put that doubt in my mind, just that tiny seed! ... So then I sort of felt like I would be stupid to go against what the doctor's said, and if anything was to happen, I'd feel awful!... So I went to [TMH] and no hassles, had him in a few hours, transferred to [PMU]. I wished I'd had him at [the PMU]. [He was] Very big [10lb10], but no problems'. (PMU Focus Group, 3085).

Table 6
Exemplars of data coded in theme of 'Midwife'.

Planned Primary Maternity Unit (PMU)	Planned Tertiary Maternity Hospital (TMH)
'I think the biggest one was with your first, often people have the opinion 'it's your first, you should really be [at TMH]', but I had a very, I wouldn't say relaxed, I love my midwife to bits, and she was really kind of like, you have got to be comfortable, if you're comfortable there's no reason why there should be anything going wrong, and if by chance there is, they'd just race you straight back in anyway, so why go there and flood it, and I think was really helpful with my decision for it [PMU birth]' (PMU Focus Group, 3416).	'…because you just don't know what might happen, and as good as the medical profession is, they don't know what is going to happen, and if you just have the backup there it takes away that risk. Because as much as some of the doctors think they are God (laughter), but I was always more relaxed about it because I knew I had a midwife, who I knew would fight my corner (group 'yeah') and I think that gave me the confidence to go into a place where someone might try and take over, because I knew that she was always listening to me.' (TMH Focus Group, 3146),
She [midwife] is brilliant, she gave us complete confidence in her and her ability in her job to do and make the right decisions for us. She was caring and very knowledgeable' (PMU Survey, 3188).	'Feeling confident in the care and expertise of my midwife – trust her completely' (TMH Survey, 3044)
'my midwife was fantastic and I felt so supported by her and confident that she understood me and what I wanted for all parts of my pregnancy, labour, birth etc' (PMU Survey, 4098)	'My midwife was great. She provided honest, useful information to me and my husband. We felt we were able to make robust decisions about our pregnancy, labour and birth' (TMH Survey, 3107)

Table 7
Exemplars of data coded in theme of 'System'.

Planned Primary Maternity Unit (PMU)	Planned Tertiary Maternity Hospital (TMH)
'What's important. ultimately to have a nice safe baby, and if it's safe and you have it somewhere [PMU], but if you need help and can get to [TMH] if you need to, then I think that's the most important'. (PMU Focus Group, 5039).	'I just wanted to be somewhere if I needed any intervention it was just down the hallway, not an ambulance ride away, and for my piece of mind I needed to be somewhere where it was, what I consider safer, because everything was available for me' (TMH Focus Group, 3073).
'There are lots of women who actually don't have the option to give birth in a [tertiary] hospital and actually do fine; and so I just kind of thought well in Christchurch we have the options, but don't necessarily have to go there. And like every other women there is always an ambulance or a team close by, and I can't help but think sometimes perhaps people end up in such emergency situations because they have had all the intervention' (PMU Focus Group, 3428)	'But it ended that I could push him out anyway, so that was fine but everyone was there, push of a button and we didn't need to say, 'call the ambulance' and wait 15 minutes and then me deliver in the ambulance on the way there, or do something like that, so it worked out perfectly that they were there, right there, and things turned out fine anyway'. (TMH Focus Group, 3111)
'i had been there [PMU] before and i liked the pool and i had to be transferred last pregnancy and i didn't like that. I didn't want to have anything done i didn't really need. I knew if i needed eg. a c-section then i would be transferred in time' (PMU Survey, 3210)	'A paramedic friend of mine said to me when i was pregnant with my first baby and thinking of birthing at [PMU] 'it's not the distance from home to [PMU] that's important but the distance from [PMU] to [TMU] if anything goes wrong'' (TMH Survey, 3460)

Table 8
Exemplars of data coded in theme of 'Place'.

Planned Primary Maternity Unit (PMU)	Planned Tertiary Maternity Hospital (TMH)
'I'd read a lot as well about being comfortable with your surroundings, and also you know, having confidence in it, and like then you tend to do a lot better, in the birth.' (PMU Focus Group, 3416)	'And I would have in the back of my mind if something happened I'd never forgive myself for not having been in the right place when I had that choice.' (TMH Focus Group, 4083)
'I just, I really liked the atmosphere there, and having been there with [first baby] for a couple of days [postnatal care] I felt like it was really personal and the midwives were very lovely.' (PMU Focus Group, 3027)	'And I actually have a medical background, so I've seen a lot of what things can go wrong, and so for me it was just important just to be in the one place that things could be there if I needed them.' (TMH Focus Group, 3111)
'The [PMU] staff were confident and gave me confidence' (PMU Survey, 3106).	'Emergency facilities and staff available in the event the birth was not straightforward'. (TMH Survey, 3007)

Table 9
Exemplars of data coded as 'confidence gained from first birth'.

1. Confidence gained after 'normal' birth in TMH and positive postnatal experience in primary unit.	2. Confidence gained after first birth in TMH despite 'interventions' which included an epidural.
'And I really enjoyed being at [PMU], I would much prefer to have [second baby] at [PMU] and yeah, I guess just nice atmosphere. I mean, it's so much more sort of personal kind of atmosphere. And I don't know the risk thing, I guess I felt the same, I didn't have any drugs with my first, so I thought well you know I'd had a [normal birth], you know, the chances... And I thought I'd probably prefer to have that way and find that if I needed to transfer [TMH] isn't that far from [PMU], if there was problems.' (PMU Survey, 3027)	'Almost as soon as he was born I thought 'I don't want to do it that way again' so [for this birth] I had the same midwife and one of the first things I said to her is 'because it went okay the first time and there were no big complications can I please go to [PMU]?' She said 'absolutely you can go anywhere you want'... Because I didn't want as much intervention and I felt like if the interventions weren't available I'd be less likely to have them' (PMU Focus Group, 3009).

process, with many women using terms such as '*if anything goes wrong*', '*just in case*'; and '*if needed*' (Grigg et al., 2014, p6). A lack of faith in birth without medical intervention has also been found to undermine women's consideration of birthplace options other than a fully equipped hospital (Houghton et al., 2008; Pitchforth et al., 2009; Rogers et al., 2011; Coxon et al., 2013; Regan and McElroy, 2013). Earlier research similarly found that having previously had a normal birth gave women confidence in both the process and in their ability to give birth (Cunningham, 1993; Kringeland et al., 2010; Rogers et al., 2011).

2. Self

Other research has also identified women's confidence in their ability to give birth as influential in their birthplace decision-making (Patterson, 2009; Catling-Paull et al., 2011; Coxon et al., 2013; Regan and McElroy, 2013). Earlier work by Davis-Floyd (1992) identified women in her study with a holistic viewpoint as having greater faith in the ability of their bodies to give birth than in technology's capacity to protect them from harm (Davis-Floyd, 1992). The EMU study findings also reflect the holistic-technocratic model continuum mentioned earlier, although it is more complex, multidimensional and nuanced than the description suggests.

3. Midwife

Interestingly, almost all of the study participants (in both groups) expressed confidence in their midwife. The context of this study is one of full (relational) continuity of care regardless of planned or eventual birthplace, which may have influenced the confidence the participants expressed in their midwife. In a context without continuity of care recent British research found that women did not have confidence in midwives' skills (Lavender and Chapple, 2005). Other research in the same context found that the midwives lacked confidence in themselves, the birth process or the primary level facilities, even if the women had confidence in the midwives (Houghton et al., 2008). In a broader context for birth planned outside of an obstetric-led hospital, recent Australian research regarding women planning a publicly-funded homebirth found those women had confidence in their midwives (Catling-Paull et al., 2011). Canadian research also found women planning either hospital or home birth with midwifery care had confidence in their midwives (Murray-Davis et al., 2014).

4. System

Like recent Australian research into publicly funded home birth (Catling-Paull et al., 2011), the current study found the PMU group had confidence in the maternity system and the availability of appropriate resources and believed that transfer could occur in an acceptable, safe and timely manner, should it be required. In contrast, the TMH group did not express confidence in the transfer system, believing that transfer from a (freestanding) primary unit might take too long, be unpleasant and potentially unsafe. Although, as reported in the first article, avoidance of intrapartum transfer was only occasionally given as a rationale by women for their plan to give birth at the TMH in this study (Grigg et al., 2014). Previous British research, set in the context without continuity of care, identified fear of transfer in labour as one of the factors influencing birthplace decision-making, (Pitchforth et al., 2009). The organisation of the maternity system and its impact on the efficacy and efficiency of referral, collaboration and transfer can influence women's experience of and confidence in it, although it is rarely studied (Skinner and Foureur, 2010; Wiegers and de Borst, 2013). The subject of transfer itself has been the topic of research, but is beyond the scope of this paper. Subsequent papers will report the New Zealand EMU study's evaluation the timing, frequency, reasons, urgency and outcomes of transfers from PMU to TMH, and women's experience of birth place plan changes and labour transfer.

5. Place

Confidence in a primary unit as a safe place to give birth for well women is aided by the belief, which falls within the 'holistic' model of birth, that safe birth does not necessarily require hospitalisation and medical supervision (see online supplementary material). Recent evidence on clinical outcomes for well women in midwife-led maternity units compared with obstetric-led hospitals, in Western resource-rich countries, supports the belief that women and babies are at least as safe in primary level units (Birthplace in England Collaborative Group, 2011; Davis et al., 2011; Overgaard et al., 2011; Monk et al., 2014; Stapleton et al., 2013). The previously reported New Zealand EMU study results identified several things the women value in a primary unit when accounting for their birthplace decision (Grigg et al., 2014). For example, its 'low tech' or 'unhospital-like' environment, closeness to home, calm, quiet, comfortable, 'small', relaxed environment, with water/pool for labour and birth, where staff (midwives) on duty have both time and skills to care for and support them. The significance of the environment for birth has been well documented previously (Fahy et al., 2008; Havill, 2012; Hammond et al., 2013). The reputation of a unit in a community has also been identified as influential in women's birthplace decisions (Emslie et al., 1999; Barber et al., 2006; Patterson, 2009). In order for women to plan to give birth in a primary maternity unit women need access to this type of facility, whether free-standing or along-side an obstetric hospital. The facility needs to be close enough to both women's homes and to the acute/tertiary hospital to be a genuine option. The units need to have the characteristics and facilities valued by women wanting to use them, and be well funded and managed and staffed appropriately, with access to effective transfer arrangements and specialist services, when they are required.

Building confidence in order to enable women to plan to give birth away from a hospital environment is a complex and difficult process. Confidence is based on beliefs. Beliefs can be deeply held and value laden and are influenced by a range of personal, social, cultural and political factors. It is well understood that beliefs regarding birth are strongly context-bound and most powerfully influenced by the complex contrasts of safety, choice and risk (Edwards and Murphy-Lawless, 2006; Cherniak and Fisher, 2008; Bryers and van Teijlingen, 2010; Coxon et al., 2013). As obstetrics

and the technocratic model of birth currently define these constructs in most of the world, it is no easy task to hold alternative beliefs, however valid (Jordan, 1997; Edwards and Murphy-Lawless, 2006; Jordan and Murphy, 2009; Bryers and van Teijlingen, 2010; Davis and Walker, 2013). By identifying smaller components of confidence which appear to be influential in birthplace decision-making this study may help with changing beliefs and building confidence. Arguably, both changing and building something is best done by starting with small parts rather than the whole.

Limitations and strengths

The New Zealand arm of the EMU study was compromised by damaging earthquakes to Canterbury which started in September 2010 and resulted in the premature end of recruitment, and some disruption to birthplace choices, and generalised community stress and trauma. This resulted in a smaller sample and a wider timeframe between the surveys and some of the focus groups than planned; and more women in the PMU group, due to the initial protocol of not making follow-up calls to those booked into the TMH for the first six months of recruitment. The sample was biased towards those with a moderate ability to read and write in English, required in order to read the study information and consent forms. Although an interpreter was offered no one took up the offer. Fewer Māori women joined than in the background population, which is commonplace. The surveys and focus groups which asked about birthplace planning were undertaken postnatally, potentially influencing responses. Self-selection bias is present in both groups, as all of the women chose their preferred birthplace, so any psychological or motivational differences between the groups cannot be accounted for.

Although smaller than planned, the size of the study is one of its strengths, along with the high survey response rate (571 respondents). Undertaking both survey and focus groups facilitated data comparison, which proved confirmatory and complementary. The survey provided breadth of data and focus groups provided depth on some issues, enabling consideration of the complexity of the issues. The thorough process of focus group transcript and data triangulation ensured robust qualitative data analysis.

Future research and Implications for practice

Further research into the concept of confidence and the five themes identified is required, in order to identify if there is a hierarchy or total number of prerequisite confidences or additional unidentified confidences which may be influencing women's birthplace decision-making. The current findings suggest that confidence in the birth process may be fundamental, but we are not able to confirm this. The beliefs which form the foundation for women's confidence and the extent to which they are open to change also require further investigation. Research into midwives' confidence in the themes is also indicated.

If the five key confidences identified here are confirmed by future research, midwives, planners and childbirth educators may better understand women's birthplace decision-making. This may inform birthplace conversations between midwives and childbearing women/families. It may aid the development of strategies for strengthening women's confidences, and provide a framework for resources for midwives and women.

Conclusions

Birthplace decision-making is both important and complex, in common with many other aspects of childbirth. It is strongly influenced by the constructs of safety, choice and risk, and the context within which it occurs. A multiplicity of factors need to converge in order for all those involved to gain the confidence required to plan what in this context is a 'countercultural' decision to give birth at a midwifery-led primary maternity unit. 'Confidence', a complex construct, was identified as the key enabler for women to plan a primary unit birth. The findings from this study suggest that women who have confidence in the birth process, their ability to give birth, their midwife, the health system and the intended birthplace are able to make such plans. Addressing the underlying beliefs which influence these confidences in women may facilitate well women in western resource-rich countries to comfortably plan to give birth away from high-tech hospitals.

Conflict of interest

No conflicts of interest exist.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.midw.2015.02.006.

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