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# The tensions of uncertainty: Midwives managing risk in and of their practice

Joan Skinner, R.M., PhD (Senior lecturer)*, Robyn Maude, R.M., PhD (Senior lecturer)

*Graduate School of Nursing Midwifery and Health, Victoria University of Wellington, New Zealand*

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ABSTRACT

The tensions of uncertainty: midwives managing risk in and of their practice. There has been a fundamental shift in past decades in the way midwifery is enacted. The midwifery attributes of skilful practice and conscious alertness seem to have been replaced by the concept of risk with its connotations of control, surveillance and blame. How midwifery manages practice in this risk framework is of concern. Taking a critical realist approach this paper reports on a theoretically and empirically derived model of midwifery undertaken with New Zealand midwives. The model is a three legged birth stool for the midwife which describes how she makes sense of risk in practice. The seat of the stool is being with women and the legs are 'being a professional', 'working the system' and 'working with complexity'. The struts which hold the stool together are 'story telling'. Risk theory is reviewed in light of the empirical study and a theoretical gap of uncertainty and complexity are identified.



## Introduction

There has been a fundamental shift in past decades in the way midwifery is enacted. The midwifery attributes of skilful practice and conscious alertness seem to have been replaced by the concept of risk with its connotations of control, surveillance and blame (Chadwick and Foster, 2013). The complexity of the task midwives face given the current dominance of the risk environment seems unacknowledged. Midwives face the complex task of brokering multiple paradigms of birth and risk, their own included, as they provide care to women and their families making the transition to parenthood; all within a context of uncertainty about what might eventuate. Current ideologies dichotomising birth into normal or abnormal, low risk or high risk, having a technocratic or social model, and being medically led or consumer focused, belie the reality of the complex set of shifting, competing and often unpredictable circumstances that the midwife must take into account as she supports women to birth. In some sense midwifery can be described as not only about'being with' women but is also a profession of 'being between'; brokering multiple paradigms of birth and of risk (Skinner, 2003).

Current constructions of risk have been widely theorised. Risk has been also investigated in maternity care (Lane, 2012; Smith et al., 2012; Coxon et al., 2013; Coxon, 2014), and there is now some empirical evidence exploring how risk is reflected in the actual practice world of midwives (Mead and Kornbrot, 2004; Lankshear et al., 2005; Scamell and Alaszewski, 2012; Scamell and Stewart, 2014). This paper adds to the body of knowledge in relation to risk and midwifery by describing a theoretically and empirically derived model which proposes how midwifery is constructed in the current risk driven environment and how midwifery manages to moderate or 'broker' competing discourses. It essentially seeks to answer the question of how midwives make sense of risk in the real world of their practice and how this then might inform current risk theory. The particular contribution of this work is that it has examined risk and midwifery in New Zealand, where the model of autonomous midwifery-led care is the norm, thus facilitating insight into decision making about risk, where it is less directly impacted on by institutional and medical constraints.

## Theories of risk

There are two strands of risk theory that have been identified: techno-rational and sociocultural (Lupton, 1999; Zinn, 2008). Both are well described in the literature and emerged as theoretical proposals in the late 20th century. Techno-rational theory approaches risk as measurable and manageable. This approach sees risks as real and seeks to control or avoid them. It focuses on the mathematical calculations associated with the determination of the probability of an event occurring (Oakley, 2000). More importantly for midwifery, the techno-rational approach claims to define and measure what might be considered normal in a

* Corresponding author.
*E-mail address:* Joan.skinner@vuw.ac.nz (J. Skinner).

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population (Hacking, 1990). Anything outside of normal and anything seen as potentially uncontrollable then becomes risky. Through the bio-medical gaze however, even the normal itself can become risky as a normal outcome cannot be seen or measured till after the event. Risks are therefore identified and controlled through the use technology, surveillance and intervention and are seen as objective and rational (De Vries, 1996; Cartwright and Thomas, 2001). For the midwife, any attempt to apply such epidemiologically based risk calculation to individual care planning in an attempt to manipulate outcome is subject to the ecological fallacy (Portnov et al., 2006) and is fraught with systematic error (Heyman, 1998). Despite all attempts of control, uncertainty remains.

Sociocultural risk theories go some way to expanding the understanding of risk. These too emerged in the late 20th century. Two key theorists, Beck and Douglas have made a significant impact on how we understand the current risk context in which we are immersed. Beck (1999) proposes that we now live in a 'risk society'. He states that our attitudes towards risk are in the process of undergoing fundamental change. Despite having never been safer, we are caught in a paradox; beginning to understand that technology is not able to control risk, yet at the same time still expecting it to do so. Thus our anxiety grows, as does our need for accountability or blame. Becks theory proposes that we are now seeing how complex the world really is yet have no framework or paradigm to deal with this. Our intensifying attempts at certainty and controllability paradoxically create even more risk (e.g. soaring caesarean section rates).

What Beck does not address to any great extent is the cultural variability in risk perspectives. These cultural perspectives concern the way societal forms affect the way individual and group decisions about risk are made. The most influential thinker in this field has been the anthropologist Mary Douglas (Douglas, 1994) who rejects both the objectivist approach and an individual rational choice approach She proposes instead that risks are decided upon according to the cultural meaning associated with them, values and uncertainties being integral to choices. Decisions are based on social rather than scientific knowledge with an underlying understanding that some knowledge is seen more authoritative. This cultural approach therefore helps us see risk decision-making as a result of community consensus, over rational choice. This can be seen in practice for example, in the decision making about place of birth.

One can see the potential relevance of these theoretical approaches to current forms of midwifery practice: a rise in anxiety, a focus on blame, and an overarching need for control and surveillance. There are many question to answer about how midwives manage to 'make sense' of practice in the 21st century. How does midwifery manage to support its basic relational nature and to claim expertise in 'normal'? How does it manage to maintain its watchful alertness in the face of uncertainty within the current risk context? What might it be able to offer as an alternative to a risk-driven, anxiety-inducing, intervention-racked, control-obsessed birth experience for new mothers?

## The empirical approach

The research undertaken to explore the place of risk in midwifery practice took a critical realist approach which enabled the incorporation of diverse theoretical approaches and supported the idea of multiple risk paradigms. This philosophical basis proposes that knowledge should be explored through multiple lenses and that knowledge is both fallible and emancipatory (Bhasker, 1989; Danermark et al., 1997; Walsh and Evans, 2014). It provided the ontological and methodological support for the study. The research also needed to accept the complex nature of midwifery practice and be open enough to encompass the full range of midwifery responses, acknowledging that risk in the real world may be perceived as both real and as constructed. For the purposes of the research, risk was operationalised as the referral for obstetric consultation; the place where it is both identified and acted on. It was in this place that risk was more visible and more active.

The research was undertaken in New Zealand where midwives are the main providers of maternity care. The midwives in the study were all Lead Maternity Care providers, providing continuity of care, practicing autonomously, and being self-employed. They are able to continue to provide care in collaboration with obstetricians when risk factors are identified. Eighty percent of birthing women choose this type of care (Ministry of Health, 2015). Maternity care in New Zealand is fully state funded, can be provided in homes and/or hospitals. Partnership with women is the underlying philosophical approach which is embedded in regulation, standards for practice, and in how it is funded (Ministry of Health, 2007). New Zealand midwives have considerable decision making powers around risk, with systems in place to ensure women's involvement when collaboration with medicine is needed. Examining risk in this context, where midwives are less constrained by institutional demands and have much freer range of decision making enables a more open examination of how risk for midwives is perceived and managed.

In keeping with the critical realist methodology, the research took a mixed method approach. The first method was a national total population (649) postal survey of midwives' referral for obstetric consultation practices and their ongoing involvement in care. It also examined their attitudes towards the risk environment, including the medico-legal context, the referral guidelines and the degree of successful collaboration. There was a 52% response rate. The results of the survey are reported elsewhere (Skinner and Foureur, 2010).

The second method was the undertaking of six focus groups with midwives in a variety of sites across New Zealand. These were undertaken by the lead author, a practicing midwife and postgraduate midwifery teacher and researcher. The settings were chosen to reflect demographic sites with different characteristics (e.g. rural and urban) and also to represent a cross section of regionally analysed survey responses. The intention was to hear a wide variety of experiences and opinions. Once the sites were chosen, participants were either self-selected by identifying their wish to participate on the survey response form or volunteered during regional midwives' meetings. There were between 4 and 9 midwives in each group. Discussion began with how referral for obstetric consultation worked in their area and, using a semi-structured approach, the midwives were supported to explore other areas of risk such as risk screening, the medico-legal environment, shared decision making and what impact this had on how they practiced. Preliminary data analysis of the survey had been completed prior to the focus groups, so at the end of the discussion findings were presented to the group for comment.

These two data sets were initially analysed separately. The survey was analysed statistically. The focus group data were grouped and regrouped into themes and subthemes using first a content analytical approach and then a theoretically derived approach. Following this the key findings of the survey and the themes from the focus groups were analysed together in what critical realists refer to as retroduction, the creative leap, in which a model was created (Danermark et al., 1997). There were four theme areas from the focus groups. Once key findings from the survey were integrated alongside the focus group themes the model was created. This model has been presented in a midwifery text as an aid in the support and development of new midwives (Skinner and Dahlen, 2015). The final component of this piece of

research is to reflect on the model in light of existing risk theory. This is being undertaken not only to establish how the model might be reflective of contemporary risk theory but also to contribute to risk theory itself. The use of critical realism, with its potential for both theoretical support and theoretical construction, and its critical edge, offered the possibility for seeking a deeper understanding of the model, identifying what might assist the midwife in her work. The research received ethical approval from both the Human Ethics Committee of Victoria University of Wellington and from the Regional Health Ethics Committees.

## The model

We found it helpful to conceptualise the results of the study in terms of a 'birth stool' – a theoretical one for the midwife. The idea for the stool emerged from the comment of one of the participants, a new midwife in her first year of practice. When we were discussing how the concepts of normal and risky could be understood, she said:

> *Yeah, I found I had to redefine normal when I started practice. Because I had a concept that you're physically well, that you're emotionally stable and that you're financially or economically stable too. And that was normal. Now what I found in reality is that there's always one leg missing on the stool. There's always a leg missing. And I had healthy strong women with absolutely no money and no partner or he's a criminal. It just was awful. And that was normal for her. And then I had really stable relationships and financially okay and everything is hunky dory and then physically, bang, we've got something wrong. So it just seems to me every single client has one leg missing on the stool and that to me is now normal. And that's life. That there are problems and that's normal. So you know that's kind of my picture now is that you're bloody lucky if you get all three at once.*

This comment inspired the creation of the image of a three legged stool. However, in this case it has not been used to reflect women's risk but to portray how midwives manage or 'make sense' of risk in their work (Fig. 1).

The seat of the 'birth stool' is called 'being with women' and reflects the highly relational nature of midwifery. This concept was central. Once the midwives identified risk and referred the women for an obstetric consultation, they mostly continued to be involved in providing some care. Only ten percent of the women who were referred did not have any ongoing involvement with their midwife even when the obstetrician took over clinical responsibility. In the discussions, the midwives spoke about the needs of the woman as being central. For the women who were identified as 'at risk' the midwives talked about how they were in even more need of continuing the relationship in which trust had been formed.

> *I would also say that in high-risk women often the risk is minimised by that continuity and trust and they are so much more relaxed. So you actually can often alleviate some of the symptoms and side effects.*
> *Yeah, and it can be that emergency response or it can be that anticipation of guiding them in a different direction and helping them to make those decisions. And they trust you to do that because we've worked with them through their pregnancy.*

There was also a real sense that the women for whom they had cared expressed a wide variety of risk perspectives, and in order to help in decision making it was important to understand these

> *I often ask them about their decision making processes and how they make decisions in their ordinary life and how they might make decisions as parents.And whether they like to make decisions that are based on research or decisions that are based on their life philosophy or decisions that are based on doing something to protect their baby, or doing something that is perceived to be seen as protecting your baby, or not doing something that is seen to be protecting their baby. And I so often ask them to sort that out first and then when they come back and they say 'oh well this is our world view'. Then I know which way to approach it with them. Which means it isn't just a sentence slotted into a tick list.*

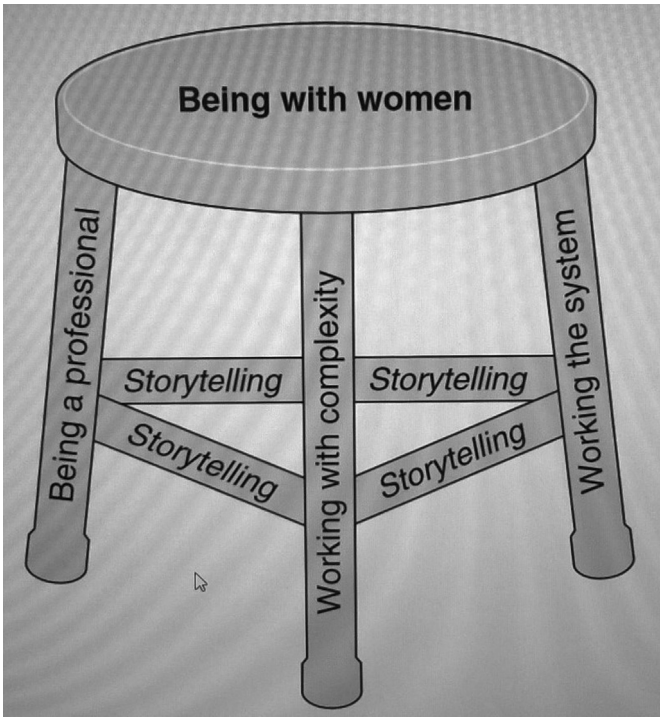


**Fig. 1.** The midwife's birth stool.

The relationship they have with women is pivotal and they told many stories from practice which reflected this. There was a strong sense of needing to protect and prepare her for the obstetric consultation and of needing either to be present or to get feedback about how it went in order to assist the woman to make sense of what was happening. They 'brokered' the different perspectives. This could be fraught and there were many challenges. They relied on three aspects of care to support their practice and these formed the three legs of the 'birth stool': 'being a professional', 'working the system' and 'working with complexity'

'Being a professional' included being both a skilled and an accountable practitioner. For the midwives in the study, having the skills and knowledge needed to provide care and to assess risk was important. They needed to keep up to date with the latest evidence but they also needed to have relational and communication skills. Their enacting of professionalism was highly relational. The link with the 'being with' was vital. There was however much discussion about professional accountability not only to the woman but also to the public and to the profession itself within the medico-legal context. It was this aspect of practice which caused the most anxiety.

> *…for me, constantly in my practice I'm aware as I said of the eagle hovering, like ready to come and have a go if you make a bit of a slip or a misjudgement or you miss anything. And I think that that constant reassessment of what's going on, goes on even 30 years down the track, that you're constantly thinking 'are we okay here?' But I think it takes quite a toll. Because I think for me, and I*

*would consider myself an experienced practitioner, I'm very conscious of that and it's not necessarily for the woman's protection. It's the medico legal protection for myself that I'm considering. Because I'm pretty happy with what's going on…..*
*But I'm very conscious of what happens if I end up transferring in, or when do I decide to transfer of what's acceptable 'in there'.*

Here we see the midwife herself at risk. The difficulties the midwives expressed with personal accountability for practice was an important finding of this research. In some sense the midwives, especially the experienced ones, expressed much more comfort about dealing with the women's risk than in dealing with their own. Although the midwives attempted to put risk into perspective for women in order to minimise fear, they were challenged in putting their own risk into perspective. Risk for them was a double edged sword.

Midwives of course do not work in isolation. They work within a complex system which provides a framework for practice. The second leg of the 'birth stool' then was called 'working the system' and it was named as such because it was evident that they manipulated the system as much as possible to provide care that was focused on the needs of the woman rather than the demands of the system itself. There were three areas of interest that emerged. Again relationships were important. For the midwives in the study it was the quality of relationships with others in the system that mattered. Having good relationships was important, not only because the midwives felt safer themselves but also because this facilitated care that was appropriate to the needs of the woman. Midwives who had developed positive relationships with obstetricians were 'allowed' greater autonomy in their decision-making.

*If they know that you're an experienced reliable midwife they'll give you far greater leeway than somebody who they don't really know or they don't really trust. So it's sort of a combination of many different factors.*
*It's always quite difficult when you're transferring someone in, in labour and you've got the new registrar. You know from what they're asking you, that they don't actually think that your skills are very good. And it takes probably two or three times to actually see that person again before they really think 'oh well perhaps she does know what she's talking about'. And they just let you get on with what you want instead of wanting to start at the very beginning and you waste a whole lot of hours.*

There was some indication in the groups that trusting relationships with obstetricians were being eroded by the anxieties induced by the medico legal risk environment. The ability to chat informally about problems was being undermined as doctors became increasingly anxious about what was negatively referred to as 'corridor consultations'.

The second aspect of 'working the system' relates to understanding and working with the processes that the system puts in place. These were the guidelines, policies and protocols and pathways which were seen as a risk management tools imposed by the institution, not so much for the woman's risk but rather as a tool for managing the institution's risk. Working the system also meant working the power relations. Power play was not isolated to interactions between midwives and doctors, but were discussed as being also found between the midwife and the woman, and between the midwives themselves. One of the most significant aspects of power relations between midwives and women was the nature of the power that women have over the midwife in the form of accountability and the requirements for informed consent. The midwife was seen as having power over the woman in that her knowledge could be seen as authoritative but is also subject to the power of the woman. The midwives acknowledged this, and attempted to manage it with a rather paradoxical sense of 'protective empowerment'. The midwives felt that they knew the system better than the woman, and needed to support and protect her journey through it.

*It's not that I'm like a mother lioness over cubs or something trying to defend them from other people, but I know that there's going to be input apart from my own and I can't always trust that and I think that's where my grief comes from. That I have some very unreliable obstetricians who will fill their heads up with all sorts of rubbish and I have other ones who are so good, who give support and still try to stay on the normal track. And there's this sort of huge gap between the two and I don't feel comfortable because I can't guarantee that we're going to get this one. It could be that one or it might be she's being counselled by this one and seen three or four times in clinic by this one. And then on the actual day it turned out to be that one and I think 'oh shit'! You know, it's just loss of control.*

Midwifery claims a position 'with women' within a professional relationship and that it does so based in a system of maternity care that needs to be manipulated or 'worked' in order to do so. The study revealed that this was no simple task and that there are many contradictions and paradoxes involved. So much so, that a theme emerged of its own to reflect this, 'working with complexity'. The place where this complexity is most clearly revealed is the place where 'normal' was defined. Midwives interpreted normal in a wide variety of ways. The risk/normal dichotomy was blurred as midwives perceived that women with increased risk, both social and physical could be considered normal and could have normal birth outcomes. Normal became a problematic description. It seemed that for the midwives there was a space in practice between the assessment of risk and the decision to act, where the complex nature of the work and the multiple and often conflicting claims made decision-making unclear. There was for many of them what was referred to as a 'grey area' of practice in which uncertainty lay. These 'grey areas' of practice lay not only in decision making around the physical processes of birthing but also in the relationships that they developed with women, with medicine and with the system. There was a good deal of unknowing and uncertainty. The more experienced midwives described how these grey areas of practice became even bigger the more experienced they became. Yet as they became more experienced, uncertainty became less disturbing as their practice wisdom grew. They accepted that risk and uncertainty were normal parts of practice.

*And I think there's a huge area of grey. And the more I've practised the more grey there is which makes it harder. I've got all this space in here. I'm swimming around really thinking 'Now am I okay, can we keep going, what if she does this, what if she does that?" And I find the grey area is the challenging bit. I mean the black and white are easy, but it's that big grey area and the more I practice the more grey there is.*

Most importantly, uncertainty did not refer only to the risk of something going wrong. This unknowing was much wider, also encompassing the possibility of things going well.

*The more experience you have the more, that grey area is so variable. So I can see that the more cases you have and people, the greyer things get. This is a very humbling profession. People and things don't happen the way you think. On the other hand you can be very pleasantly surprised*

Positive outcomes were just as uncertain as negative outcomes. Redefining 'risk' as 'possibility' shifted the whole way they saw their practice. For some of the midwives though, the risk

dominated environment in which they worked was overwhelming. There was simply no way through.

The final part of the midwives' birth stool' is named 'storytelling'. These are the struts that help to keep it secure and stable. In listening to the midwives it appeared that storytelling in itself seemed to be an important process for the midwives on a number of levels. A story from practice was told in almost every discussion, keeping them connected to the real experience of the women. Each story revealed the complex and contradictory nature of midwifery as a professional activity. They used stories to illustrate their role as professionals and to show how the system in which they worked functioned. They used them to explain and justify their opinions and their actions. Stories made sense of the complexity of practice and illustrated how they worked with uncertainty.

The 'birth stool' model can be used at many levels. Midwives can use it as a tool to reflect on practice and to keep them connected to women. Each part needs to be attended to. The stool facilitates their ability to provide care, both despite and because of the current risk environment in which they work. It can assist them in putting risk and its management into perspective. Educators can use the stool to develop integrated and competent new midwives; managers can use it to provide systems that support the midwife; researchers can attend to areas of the birth stool that are less well understood. It provides a model of practice that encompasses what the midwives should know and how they should behave. The third leg, (complexity), and the struts (storytelling) add dimensions to the understanding of midwifery practice not previously identified as integral to it.

## Theoretical reflections on the model

Much of the midwives experience of risk, as represented in the 'birth stool' are reflective of current theoretical approaches to risk. Yet the model also provides some insights as to where the gaps are and where possibilities to rethink risk might lie. The two theoretical risk approaches were represented across all aspects of the model. There are certainly reflections of the techno-rational perspective found. Skilled midwifery care relies on the tenets of evidence based care which plays a dominant role in decision making. There was, however, little quantification of risk expressed by the midwives, and they were cognisant of the unpredictability of outcome. They did express the ideas that decision-making was far from rational. Where the techno-rational approach was most problematic was in the area of accountability. The promise of the controllability of science in providing a safe outcome and in managing risk was problematic. The midwives talked of women's expectations for a safe and well managed outcome. Midwives' anxiety related not so much to risk within the birth process itself but of their own risk, seeing any accountability measures as frightening. The name, shame and blame culture was a very present part of practice, as women and institutions sought to blame when unexpected outcomes arose. Risk as the double edged sword was real in their practice.

Socio-cultural approaches are also represented in the stool. Becks ideas of anxiety being related to the tensions between the promises of controllability versus the reality of risk were clearly evident. For the midwives, the attempts to protect the normality of the birth experience and to support a more social model of birth were thwarted by the growing intervention rates which they saw as counterproductive. They worked the system as much as they could to protect this more holistic normal birth approach. They were both constrained by risk and acted in resistance to it. Douglas's cultural approaches to risk can also be found. Risk decisions were made very much in line with a values based approach rather than on the basis of science. The social model of midwifery, which was very much consumer focused and relationally based, also enabled midwives to support a variety of women's decision making, such as place of birth. Blame, too, played an important role.

Post-structural approaches too, can be seen in the stool, especially in 'working the system'. The growing environment of surveillance and control was present in the institutional processes in which even the minutiae of practice were overseen. Explicit guidelines played an important role in delineating and restricting flexible and responsive practice. Working outside the guidelines could be a fearful process. The relational, responsive nature of practice could be undone by diagnostic surveillance, risk assessments and requirements for detailed and extensive documentation. What was in the past perceived as normal was becoming smaller and smaller. The power positions too were represented, not just in the dominance of the medical discourse but also as power within the midwife/mother relationship.

It is in the third leg of the stool where gaps in current theoretic understandings of risk become evident. In working with complexity we see the midwife's role in managing multiple paradigms in supporting women to birth, and where we see her work with uncertainty. Working with uncertainty was enabled by the strongly relational nature of midwifery. Complexity theory also makes some contribution here. It tells us that tension and paradox are natural phenomena and that problems are often not resolvable through simple cause and effect processes. Instead outcomes can occur in ways that are non-linear (Byrne and Callaghan, 2014). It tells us that unpredictability is inherent in complex systems but that patterns do emerge through inherent self-organisation. Despite these patterns there always remain things that are unknowable and unknown (Plsek and Greenhalgh, 2001). It is complexity theory that offers the position that uncertainty is not necessarily negative, and which fits with the experience of the midwives in the study. Their understanding of uncertainty encompasses the possibility that things may go wrong (as in risk) but that also things may go right, and that either is possible. The storytelling may be providing some of complexity theory's nonlinear explanation. Being able to tell the story facilitated both reflection and explanation.

Taking a focused look at uncertainty in the context of midwifery practice opens up the possibility of a much deeper understanding of the complexity of practice. It offers new ways for teaching and for support. Smythe (2000) who explored the concept of safety, again in the New Zealand context, also made comment on the important part played of what she called the hiddenness of practice. What is safe and what is risky in practice are not necessarily revealed and can remain unknown. The implications in childbirth for the woman and for the midwife of understanding the nature of uncertainty, return us to the idea of the need for conscious alertness and calls for a rethink on how we deal with risk. As Smith et al. (2012) comment, risk as a dominant stand-alone concept in maternity care lacks integrity lacks balance and 'may not hold its own'. Examining and working with uncertainty, although more complex may free birth from some of its growing fear.

We argue that the current dominance of the risk approach in the maternity climate has masked the real issues fundamental to midwifery practice, one of which is the notion of uncertainty. How uncertainty is expressed and incorporated into midwifery practice, in the New Zealand context at least, facilitates possibility. Risk and its management has in a sense given false hope of control and closes down possibility. This model suggests that it is uncertainty that needs to be exposed both theoretically and empirically. The only thing we can be certain of is that nothing is certain. In general current empirical and theoretical work on uncertainty in health is light. In general it presents uncertainty in health care as related to

imperfect scientific knowledge (Thompson and Dowding, 2001; Cranley et al., 2009; Olsen and Abeysinghe, 2014; Berger, 2015). The only recent empirical study located which described uncertainty in health in any way other than in relation to a lack of scientific knowledge was undertaken by Kirkegaard et al. (2012). In their examination of general practice decisions they identified two types of uncertainty; medical and situational. Alaszewski and Brown (2007) in their theoretical paper also go some way to exploring uncertainty outside the scientific paradigm, pointing out the paradoxical nature of scientific knowledge which both reduces and contributes to uncertainty as its limits are understood. The 'birth stool' describes uncertainty in a way not evidenced before. Increasing uncertainty for the midwives was not related to lack of knowledge but it actually increased with growing knowledge. One might propose that they were coming to an understanding of Alaszewski and Brown's 'limits of knowledge'. What was interesting was that this decreased, not increased their anxiety. This new way of seeing risk, reconstructing it as uncertainty in the wider sense responds to the risk theorists' call for new risk constructions. Beck (1999) discusses the need for a new paradigm, a more postmodern way of dealing with the life's uncertainties and Douglas and Wildavsky (1982) critiques the way blame is managed and almost plaintively wishes for the possibility of forgiveness. A shift to uncertainty might go some way to achieving this.

How the midwives managed to construct uncertainty positively is revealed in the connections and the relationships they have with women, staying connected with the seat of the 'birth stool', the 'with woman' part of practice. Every leg of the 'birth stool' had this attribute. This is also reflected in the literature which stresses the importance of the quality of the relationship in dealing with uncertainty (Alaszewski and Brown, 2007; Kirkegaard et al., 2012; Chadwick and Foster, 2013; Wilde, 2014). New Zealand midwifery has a strong philosophical basis of partnership which is present at every level including education, regulation, and practice (Guilliland and Pairman, 1995). This model of care is not yet widely practiced internationally but is seen as an exemplar of what might be possible (Page, 2014). Continuity of midwifery care, the basis of the New Zealand model has been found to improve outcomes (Sandall et al., 2013). It is within this model, which supports the women as central and relationships as pivotal, that current theoretical risk approaches have been found to be only partly explanatory.

## Conclusion

This paper makes an empirical contribution to how risk is understood and enacted in midwifery. It has identified uncertainty and complexity as important theoretical concepts to add to techno-rational and sociocultural risk theory. Midwifery acts both despite and in resistance to risk. Its autonomous and collaborative nature enables the mediation and acceptance of complexity and uncertainty. Uncertainty, currently described negatively as risk discourse is under-theorised and empirically undeveloped. The theoretical gap of how uncertainty is dealt with in practice to facilitate the best possible outcome for women and their infants needs further exploration. This research does however offer some hope for how midwifery might support a new order called for by risk theorists, one more accepting of the complexity and uncertainty inherent not only in birth but in life itself. Midwives' role as paradigm broker, complexity manager, unpredictability monitor adds much to the possibility of how risk might be reframed.

## Conflict of interest

There is no conflict of interest in the undertaking or reporting of this research.

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