On speaking terms:

Choice and shared decision-making in maternity care

Marianne J. Nieuwenhuijze

ISBN: 978-94-6259-181-3

Cover images
João Cutileiro, Lago das Tágides, Parque das Nações, Lissabon

Design and layout
Promotie In Zicht, Arnhem

Print
Ipskamp Drukkers, Enschede

On speaking terms:

Choice and shared decision-making in maternity care

Proefschrift

ter verkrijging van de graad van doctor
aan de Radboud Universiteit Nijmegen
op gezag van de rector magnificus prof. mr. S.C.J.J. Kortmann,
volgens besluit van het college van decanen
in het openbaar te verdedigen op dinsdag 20 mei 2014
om 16.30 uur precies

door

Marianne Jolanda Nieuwenhuijze
geboren op 13 juni 1959
te Vlissingen

Promotoren

Prof. dr. A.L.M. Lagro-Janssen
Prof. dr. R.G de Vries *(UM/University of Michigan)*

Copromotoren

Dr. I.M. Korstjens *(Zuyd)*
Dr. J. de Jonge *(VUMC)*

Manuscriptcommissie

Prof. dr. J.A.M. Kremer, *voorzitter*
Prof. dr. M.A. Verkerk *(Rijksuniversiteit Groningen)*
Prof. dr. D.E. Bick *(King's College London)*

Contents

1

General Introduction

Anna Berg is pregnant with her second child. When she looks back on the birth of her first child, she remembers that labour started slowly. At some point, without any deliberation, the midwife broke her water. Because progress remained slow the midwife referred her to the obstetrician. Anna was glad that her partner was with her, as she felt uneasy with the unfamiliar faces that walked in and out of her room. Although the pain medication reduced the pain and helped her to cope with the contractions, she is still not sure whether she had really wanted and needed the medication. Couldn't she have used the bath? In the end, the birth went fast and the baby was healthy. She felt so happy. However, within 10 minutes the baby was taken from her chest for the routine check. It was pretty busy on the ward and she needed to be transferred to another room, while her baby came later.
This time, with her second child, Anna wants the birth to be a better experience. She wants to be actively involved and to participate in the decisions to be made during the birth.

Childbirth is a major life event that affects women's physical and emotional health and leaves lifelong, vivid memories [1]. In addition to a safe birth, women also benefit from a positive birth experience; both are important for the start of a healthy family life. Having a sense of control during birth has a positive influence on women's birth experience. Active involvement in care - knowing what is happening, having choices and sharing in decision-making – contributes to women's sense of control in childbirth.

Over the course of history, the circumstances of birth have changed. For millennia women gave birth in their own environment, surrounded and supported by other women [2]. Women giving birth had to rely on this support and on their own strength, as they had to deal with the uncertainty of how childbirth would end for themselves and their child. In the past hundred years, birth has become much safer for women and babies in the developed world, a change that is hailed as one of the 10 great achievements of public health in the 20th century [3]. Maternal and perinatal mortality in high-income countries declined steeply, e.g. combined foetal and neonatal death in the Netherlands was 78.6 ‰ in 1900 and 8.7 ‰ in 2000*, and maternal mortality was estimated 9.0 per 100,000 inhabitants in 1900 and 0.1 per 100,000 inhabitants in 2000** [4]. Better hygiene and nutrition, availability of antibiotics, greater access to health care and technologic advances in maternal and neonatal medicine contributed to these improved rates and to safer births. Technology is now a self-evident part of birth with 27-50% of women receiving oxytocin during birth and rates of caesarean sections above 30% in 1 out of 10 countries worldwide [5-7].

With the emphasis on safety and the drive to more and better technologies, professionals may forget that birth is also a powerful emotional and social event, an event that influences a woman and her family for the rest of their lives [1]. The interrelated social and emotional elements that women experience are often overshadowed by more

* Foetal death = born dead after 28 weeks of pregnancy; neonatal death = death within 4 weeks after birth.
** Death from complications of pregnancy, birth and postnatal period per 100 000 of the average population.

concrete components such as quality of care, interventions, and health measured in rates of mortality and morbidity [8,9]. Safety in birth *is* important and a healthy baby and mother are much desired outcomes, but for an optimal outcome it is also necessary for women and their partners to have a positive birth experience.

The experience of childbirth brings joy, hope, fulfilment and empowerment, as well as fear, despair, vulnerability and, in some cases, post-traumatic stress. The *experience* of birth has short- and long-term effects on the physical and mental health of women, their partners and families. If that experience is negative it can be a serious burden, even when the immediate outcome is a healthy mother and baby [10-13].

Women's experience of birth deserves attention. To truly put women and babies at the centre of care [14], the optimal outcome for childbirth is measured in terms of physical health and psychosocial well-being. This view coincides with the definition of health used by the World Health Organisation that comprises physical, mental and social well-being [15]. Further knowledge is needed about the many interacting factors and circumstances over the course of the perinatal period that contribute to a positive experience of childbirth.
This general introduction describes the literature on women's experience of childbirth and their involvement in care. I then explain how choice in birthing positions exemplifies women's choice in maternity care. Lastly, this chapter presents the aim, the research questions and the outline of the thesis.

Women's experience of childbirth and sense of control

The experience of childbirth is complex, multidimensional and subjective, and relates to both the outcome and the process of labour and birth experienced by each woman individually [9].

While the number of studies on women's childbirth experience is growing, research in this field is still limited. Studies mainly focus on women's experience of birth itself, and only occasionally the pregnancy, postnatal period or fathers' experiences are investigated [16-19].

Although a clear and complete definition of the childbirth experience is lacking, a concept analysis of childbirth experience identified four attributes: individual, complex, process and life event. While childbirth is a universal phenomenon, women's experiences are *individual*, subjective, personal and particular. The childbirth experience is described as *complex*, in the sense that it is multidimensional and dynamic [20,21]. Women's experiences during labour are not static, but evolve over time and include contradictory positive and negative feelings [21]. Due to the dynamic nature of childbirth, physical and psychological *processes* fluctuate during the experience and are affected by the outcome. Women have described birth as an 'intense powerful life experience' [22], a *life event* that affects their whole life and being.

When women evaluate their experience they include physical elements (the course of the pregnancy and birth), emotional elements (their own feelings, thoughts and behaviour) and social elements (the interaction with their surroundings, e.g. their partner and professionals).

There can be profound discrepancies between how maternity care professionals look upon a birth and how a woman evaluates her experience. What professionals regard as normal may be evaluated as a negative or even traumatic experience by women [23].

The way women experience their birth has short- and long-term implications for their own health and well-being, as well as for that of their families. The experience of birth leaves women with lifelong, detailed memories [1]. A positive experience contributes to women's sense of accomplishment, self-esteem, feelings of competence and well-being [1,24-26]. It enhances maternal–child attachment and positive descriptions of their baby [24,25]. A negative childbirth experience can severely influence women's emotional well-being causing posttraumatic stress symptoms or disorders, and depressive mood [11-13,27-31]. This can have adverse effects on the relationship with their partner and the bond with their baby [32-34]. Negative experiences are also associated with effects on women's sexuality (late post-partum dyspareunia), with fear of childbirth, avoidance of a subsequent pregnancy, the wish for an elective caesarean section or the choice for a home birth in future births [35-47].

The experience of childbirth is influenced by a number of factors, including women's health, social environment and cultural background, the course of her pregnancy and birth, and the care offered by professionals. The place of birth, mode of delivery, transfer during birth, use of epidural and other interventions shape a woman's experience [30,44,48-52]. In qualitative studies, women list a number of factors that play a role in the way they experience childbirth, including support from their partner, support and attitudes from maternity care professionals, involvement in decision-making, sense of control over themselves and the situation, being given adequate information and pain during birth [1,20,22,32,53-66]. In quantitative studies investigating different factors simultaneously, a satisfying childbirth experience was mainly influenced by women's sense of control (over themselves and the situation), labour pain, support and interventions during birth [21,24,28,47,67-73]. Several studies found that sense of control was the strongest predictor for satisfaction with childbirth and a positive birth experience [9,68,69,74].

Control in childbirth is a tenuous concept and depends on the context. Meyer described that it can be viewed in relation to a woman's body and labour progression, pain, environment and the ability to request her method of birth [75]. She identified four attributes of control in the context of birth. First, control is defined as women's sense of being an active member of the *decision-making* process. Two other attributes involve women's *access to information* around the events related to their birth and *personal security* in women's sense of trust, respect and support from their provider. The final attribute is *physical functioning* and relates to women's sense of control over their bodies, emotions and pain.

Sense of control is also described by its internal and external dimensions [76,77]. Women's internal control includes a sense of control over self, such as thoughts, emotions, behaviour and response to labour pain [76,77]. External control is described as involvement in the birth process, knowing 'what is happening', understanding what maternity care professionals

are doing or having an influence over procedures, decisions or information [54,69,76,77]. What seems important to women is not so much the 'having' or 'being in control', but the affective component, the 'feeling' of having the possibility to influence decisions [78]. In delineating that influence, decision-making is one component. Women want to participate in decisions regarding their care, but the degree of involvement will vary depending on women's individual preferences and circumstances [20,79-82]. Women's involvement also seems to arise from the feeling that they are informed and could challenge decisions if the need arose. Or even from feeling supported enough by people present at the birth 'to let go' rather than trying to assert control over events or over behaviour [83].

Overall, women's experience of childbirth is important for their health and that of their families. This experience is influenced by many factors. Having a sense of control – as in having the possibility to influence or be actively involved in what is happening during this life-changing period - seems key to a positive childbirth experience. Given the importance of the experience and the value of sense of control, care providers need to consider how they can play a positive role in enhancing women's involvement in care.

Theoretical framework

This research has been guided by earlier work on the concept of shared decision-making. Charles describe shared decision-making as "Involvement of both patient and care provider, sharing of information by both parties, both parties taking steps to build consensus about the preferred treatment, and reaching agreement about which option of care to implement" [84].

In the past two decades, the use and effects of shared decision-making in medicine have been explored in a substantial number of studies. However, the findings of these studies cannot always be directly applied to maternity care. Shared decision-making in other aspects of health care assumes time, space for conversation and opportunity to gain insights into the preferences and desires individuals may have for their health care outcome. These conditions exist during pregnancy, but in the context of labour and birth, the process of sharing information, communicating clinical findings and reaching a decision is much more challenging.

Women's involvement in care and decision-making

Women want to be actively involved in their care during the life-changing transition period of childbirth. They want to participate in the decisions that are made during care. How to support women in making decisions in the present jungle of readily available information from numerous sources, technological developments and holistic ideas?

Decision-making is a process that leads to the choosing of a course of action among alternatives. It is a process in which those making the decision use various types of 'evidence' to make a choice [85]. This process is no longer regarded as a one-way activity. Neither the old patriarchal approach in which the health professional makes all the decisions and offers limited information, nor the notion of informed choice where the professional gives all the information leaving the entire decision with the woman, seem to meet the needs of today's women [86,87]. Most women want to participate in decision-making and they want genuine choice [79,88]. They want to take responsibility for their own health, but also value the expertise and advice from their care provider [89-91]. A joint process aimed at mutual understanding to come to a decision based on shared agreement seems the way to go [92,93]. These approaches are advocated by models like shared decision-making [94].

Choice in birthing positions as an everyday example of women's involvement in care

The different birthing positions in second stage of labour can serve as an example of choice and decision-making in everyday maternity care practice for healthy women where in principal, women's preferences should be leading. Studies suggest that freedom of movement in birth and choice in birthing positions are related to sense of control in women [24,76,77].

Scientific evidence regarding the optimal position for birth does not indicate that one position is better than another [95,96]. Studies present both physical and psychological benefits for women when they are able to adopt positions of their choice in labour and birth [97]. In some studies, women in upright positions report increased satisfaction with their childbirth experience than women in semi-recumbent or supine positions [98,99]. The only disadvantage identified is increased blood loss, this seems to be due to increased perineal oedema associated with upright positions [95,100].

In the absence of clear evidence of one position for birth being optimal, women's personal preferences can be used to determine which position to use for birth. However, there is a lack of research into factors and/or practices within the current health system that facilitate or inhibit women to choose and use various positions during labour and birth.

Maternity care professionals' role

To enhance women's experience and enable women's involvement in decision-making during maternity care, professionals play an important role [101-104]. Women value psychosocial support of care providers as addition to the medical care. They turn to professionals for emotional, informational, and tangible support, and see a personal and humane approach as very important [102,105-109]. However, there is no one-fits-all approach for this: pregnant women may differ in their preferences for the amount of psychosocial support and the topics to be addressed, depending on their individual characteristics, sociocultural contexts and support from their personal networks [110].

According to professional organisations in midwifery, psychosocial support and respect for women's right to make choices are a necessary part of midwifery care, and they emphasise that the midwifery model of care should include monitoring of psychological and social well-being of both the woman and her family as well as advocacy for women so that their health care choices are respected [111-113]. Also the CanMEDS Physician Competency Framework promotes patient-centred care with shared decision-making and attention for psychosocial aspects of illness and health [114].

However, precisely what is involved in psychosocial support remains ambiguous. There is a need for further research on this topic in relation to decision-making. It is necessary to listen to women and hear their voice in what they want and need from professionals with regard to support and shared decision-making.

This thesis

In this thesis, I will investigate how women and maternity care professionals can work together to accomplish a safe and satisfying pregnancy, birth and transition to motherhood for women in maternity care.

Based on the literature, involvement in the decision-making process during the perinatal period appears to be of significant influence on women's well-being. Maternity care professionals can support and facilitate women to participate in the decision-making process.

General aim and specific research questions

The general aim of this thesis is to gain insight into women's needs and desires for participation in decision-making in maternity care and translate these insights in a way that allows maternity care professionals to facilitate shared decision-making in the dynamic context of childbirth.

This research is primarily focused on women with a physiological pregnancy. The Dutch context with its well defined population in primary maternity care offered ample opportunities to study involvement in care for healthy women in everyday practice. Additionally, I also sought input from other contexts by studying participation in decision-making in a different maternity care system in the United States of America and by gaining the opinions on shared decision-making from an international and multi-disciplinary group of experts.

We set out by exploring what contributes to a positive experience and women's well-being in childbirth. Therefore, the research question was:

1. What are the wants and needs of pregnant women with regard to psychosocial support from midwives during the transition to motherhood? (chapter 2)

As the women in this study wanted midwives who proactively support and facilitate participation in decision-making, we further investigated this in an example of choice around birthing positions with three research questions:

2. Which birthing positions do women prefer and do they actual use their preferred positions in second stage of labour? Which factors are related to using the preferred positions? (chapter 3)
3. What is the relationship between choices in birthing positions and women's sense of control during second stage of labour? (chapter 4)
4. How is the communication between women and maternity care professionals during second stage of labour around choices and decisions regarding birthing positions? (chapter 5)

These studies indicated that decision-making in practice is a shared process between women and care professionals. Therefore, we further explored how a shared process of decision-making can be facilitated in maternity care, inside and outside the consultation room. We invited a group of experts to share their thoughts and ideas on how to achieve shared decision-making in maternity care. The research question was:

5. What are ingredients of quality criteria for shared decision-making in different situations during pregnancy and birth, and what professional competencies are needed for shared decision-making in maternity care? (chapter 6)

Outline of this thesis

The research questions are addressed in the subsequent chapters of this thesis.

Chapter 2 presents the findings of a focus group study into pregnant women's views on the topics, actions, methods and preconditions for psychosocial support from midwives during the transition to motherhood.

C*hapter 3* describes the results of a survey on women's preferences in birthing positions during second stage of labour with a specific focus on women who preferred positions other than the common supine position.

C*hapter 4* reports the results of a study into the relationship between choices in birthing positions and sense of control during second stage of labour in a population of women with a physiological pregnancy and birth.

Chapter 5 describes the findings of a qualitative study analysing audiotapes of second stage of labour on how maternity care professionals communicate with women as decision-making are made regarding birthing position.

Chapter 6 presents the consensus among experts in a Delphi study on ingredients of quality criteria and professional competencies for shared decision-making in maternity care.

In *chapter 7,* we reflect on the meaning of shared decision-making in the debate on home and hospital birth.

In c*hapter 8,* we present and discuss the main findings from the studies and discuss the methodological strengths and limitations of this thesis. Finally, we discuss implications for maternity care practice and offer suggestions for further research.

References

1. Simkin P. Just another day in a woman's life? Part II: nature and consistency of women's long-term memories of their first birth experiences. Birth 1992;19:64-81.
2. Rowland B. Introduction. In: Rowland B, editor. Medieval woman's guide to health. The first English gynecological handbook. London: Croom Helm Limited; 1981.
3. Centers for Disease Control. Ten great public health achievements – United States, 1900-1999. Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm. Accessed 27 September 2013.
4. Centraal Bureau voor de Statistiek. Available from: http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=37556&D1=54,75-120&D2=1,26,51,76,101,111-114&VW=T. Accessed 14 December 2013.
5. Stichting Perinatale Registratie Nederland [the Netherlands Perinatal Registration]. Perinatale Zorg in Nederland 2009 [Perinatal care in the Netherlands 2009]. Utrecht: Stichting Perinatale Registratie Nederland; 2013.
6. Clark SL, Simpson KR, Knox GE, Garite TJ. Oxytocin: new perspectives on an old drug. American Journal of Obstetrics & Gynecology 2009;200:35.e1-6.
7. Gibbons L, Belizán JM, Lauer JA, Betrán AP, Merialdi M, Althabe F. The global numbers and costs of additionally needed and unnecessary caesarean sections performed per year: overuse as a barrier to universal coverage. World Health Report Background paper, No 30. World Health Organization; 2010.
8. Baker SR, Choi PYL, Henshaw CA, et al. 'I felt as though I'd been in jail': women's experiences of maternity care during labour, delivery and the immediate postpartum. Feminism Psychology 2005;15:315-42.
9. Larkin P, Begley CM, Devane D. Women's experiences of labour and birth: an evolutionary concept analysis. Midwifery 2009;25:e49-59.
10. Czarnocka J, Slade P. Prevalence and predictors of post-traumatic stress symptoms following childbirth. British Journal of Clinical Psychology 2000;39:35-51.
11. Skari H, Skreden M, Malt UF, et al. Comparative levels of psychological distress, stress symptoms, depression and anxiety after childbirth - a prospective population-based study of mothers and fathers. BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:1154-63.
12. Olde E, van der Hart O, Kleber R, van Son M. Posttraumatic stress following childbirth: a review. Clinical Psychology Review 2006;26:1-16.
13. Zaers S, Waschke M, Ehlert U. Depressive symptoms and symptoms of post-traumatic stress disorder in women after childbirth. Journal of Psychosomatic Obstetrics & Gynecology 2008;29:61-71.
14. Stuurgroep Zwangerschap en Geboorte [Steering group Pregnancy and Birth]. _Een goed begin [_A good beginning]. Utrecht; 2009.
15. World Health Organization. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946, and entered into force on 7 April 1948.
16. Beake S, Rose V, Bick D, Weavers A, Wray J. A qualitative study of the experiences and expectations of women receiving in-patient postnatal care in one English maternity unit. BMC Pregnancy and Childbirth 2010;10:70.
17. Von Sydow K, Happ N. „Da lag sie eben da, wie Jesus am Kreuz . .." – Die Erfahrungen von Vätern bei der Geburt. ["There she was - lying like Jesus on the cross ..." - Fathers' experiences of childbirth]. Zeitschrift für Psychosomatische Medizin und Psychotherapie 2012;58:26-41.
18. Hildingsson I, Cederlöf L, Widén S. Fathers' birth experience in relation to midwifery care. Women and Birth 2011;24:129-36.
19. Premberg Å, Carlsson G, Hellström AL, Berg M. First-time fathers' experiences of childbirth - a phenomenological study. Midwifery 2011;27:848-53.
20. Lavender T, Walkinshaw SA, Walton I. A prospective study of women's views of factors contributing to a positive birth experience. Midwifery 1999;15:40-6.
21. Waldenström U, Borg I-M, Olsson B, Skold M, Wall S. The childbirth experience: a study of 295 new mothers. Birth 1996;23:144-53.
22. Halldorsdottir S, Karlsdottir SI. Journeying through labour and delivery: perceptions of women who have given birth. Midwifery 1996;12:48-61.
23. Beck CT. A metaethnography of traumatic childbirth and its aftermath: amplifying causal looping. Qualitative Health Research 2011;21:301-11.

24. Green JM, Coupland VA, Kitzinger JV. Expectations, experiences, and psychological outcomes of childbirth: a prospective study of 825 women. Birth 1990;17:15-24.
25. Mercer RT, Ferketich SL. Maternal-infant attachment of experienced and inexperienced mothers during infancy. Nursing Research 1994;42:344-51.
26. Hildingsson I, Nilsson C, Karlström A, Lundgren I. A longitudinal survey of childbirth-related fear and associated factors. Journal of Obstetric, Gynecologic, and Neonatal Nursing 2011;40:532-43.
27. Ayers S, Pickering AD. Do women get posttraumatic stress disorder as a result of childbirth? A prospective study of incidence. Birth 2001;28:111-8.
28. Soet JE, Brack GA, Dilorio C. Prevalence and predictors of women's experience of psychological trauma during childbirth. Birth 2003;30:36-46.
29. Bailham D, Joseph S. Post-traumatic stress following childbirth: a review of the emerging literature and directions for research and practice. Psychology, Health & Medicine 2003;8:159-68.
30. Montmasson H, Bertrand P, Perrotin F, El-Hage W. Facteurs prédictifs de l'état de stress post-traumatique du postpartum chez la primipare. [Predictors of postpartum post-traumatic stress disorder in primiparous mothers]. Journal de Gynécologie, Obstétrique et Biologie de la Reproduction 2012;41:553-60.
31. Righetti-Veltema M, Conne-Perréard E, Bousquet A, Manzano J. Risk factors and predictive signs of postpartum depression. Journal of Affective Disorders 1998;49:167-80.
32. Elmir R, Schmied V, Wilkes L, Jackson D. Women's perceptions and experiences of a traumatic birth: a meta-ethnography. Journal of Advanced Nursing 2010;66:2142-53.
33. Nicholls K, Ayers S. Childbirth-related post-traumatic stress disorder in couples: A qualitative study. British Journal of Health Psychology 2007;12:491-509.
34. Ayers S, Eagle A, Waring H. The effects of childbirth-related post-traumatic stress disorder on women and their relationships: A qualitative study. Psychology, Health & Medicine 2006;11:389-98.
35. Fauconnier A, Goltzene A, Issartel F, Janse-Marec J, Blondel B, Fritel X. Late post-partum dyspareunia: does delivery play a role? Progrès en Urologie 2012;22:225-32.
36. Nilsson C, Lundgren I, Karlström A, Hildingsson I. Self-reported fear of childbirth and its association with women's birth experience and mode of delivery: a longitudinal population-based study. Women and Birth 2012;25:114-21.
37. Nilsson C, Bondas T, Lundgren I. Previous birth experience in women with intense fear of childbirth. Journal of Obstetric, Gynecologic, and Neonatal Nursing 2010;39:298-309.
38. Gottvall K, Waldenström U. Does a traumatic birth experience have an impact on future reproduction? BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:254-60.
39. Porter M, Bhattacharya S, van Teijlingen E. Unfulfilled expectations: how circumstances impinge on women's reproductive choices. Social Science & Medicine 2006;62:1757-67.
40. Bhattacharya S, Porter M, Harrild K, Naji A, et al. Absence of conception after caesarean section: voluntary or involuntary? BJOG: An International Journal of Obstetrics & Gynaecology 2006;113:268-75.
41. Hildingsson I, Rådestad I, Rubertsson C, Waldenström U. Few women wish to be delivered by caesarean section. BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:618-23.
42. Tschudin S, Alder J, Hendriksen S, et al. Previous birth experience and birth anxiety: predictors of caesarean section on demand? Journal of Psychosomatic Obstetrics & Gynecology 2009;30:175-80.
43. Kringeland T, Daltveit AK, Møller A. What characterizes women in Norway who wish to have a caesarean section? Scandinavian Journal of Public Health 2009;37:364-71.
44. Karlström A, Nystedt A, Johansson M, Hildingsson I. Behind the myth - few women prefer caesarean section in the absence of medical or obstetrical factors. Midwifery 2011;27:620-7.
45. Kottmel A, Hoesli I, Traub R, et al. Maternal request: a reason for rising rates of cesarean section? Archives of Gynecology and Obstetrics 2012 Jul;286:93-8.
46. Jouhki MR. Choosing homebirth - the women's perspective. Women and Birth 2012;25:e56-61.
47. Boucher D, Bennett C, McFarlin B, Freeze R. Staying home to give birth: why women in the United States choose home birth. Journal of Midwifery and Women's Health 2009;54:119-26.
48. Rijnders M, Baston H, Schönbeck Y, et al. Perinatal factors related to negative or positive recall of birth experience in women 3 years postpartum in the Netherlands. Birth 2008;35:107-16.

49. Blomquist JL, Quiroz LH, Macmillan D, McCullough A, Handa VL. Mothers' satisfaction with planned vaginal and planned cesarean birth. American Journal of Perinatology 2011;28:383-8.
50. Hildingsson I, Karlström A, Nystedt A. Women's experiences of induction of labour - findings from a Swedish regional study. Australian New Zealand Journal of Obstetrics and Gynaecology 2011;51:151-7.
51. Lindgren HE, Rådestad IJ, Hildingsson IM. Transfer in planned home births in Sweden--effects on the experience of birth: a nationwide population-based study. Sexual & Reproductive Healthcare 2011;2:101-5.
52. Overgaard C, Fenger-Grøn M, Sandall J. The impact of birthplace on women's birth experiences and perceptions of care. Social Science & Medicine 2012;74:973-81.
53. DiMatteo MR, Kahn KL, Berry SH. Narratives of birth and the postpartum: analysis of the focus group responses of new mothers. Birth 1993;20:204-11.
54. Bluff R, Holloway I. 'They know best': women's perceptions of midwifery care during labour and childbirth. Midwifery 1994;10:157-64.
55. Walker JM, Hall S, Thomas M. The experience labour: a perspective from those receiving care in a midwife-led unit. Midwifery 1995;11:120-9.
56. Berg M, Dahlberg K. A phenomenological study of women's experiences of complicated childbirth. Midwifery 1998;14:23-9.
57. Fowles ER. Labor concerns of women two months after delivery. Birth 1998;25:235-40.
58. Gibbins J, Thomson AM. Women's expectations and experiences of childbirth. Midwifery 2001;17:302-13.
59. Beck CT. Birth trauma. In the eye of the beholder. Nursing Research 2004;53:28-35.
60. Lundgren I. Releasing and relieving encounters: experiences of pregnancy and childbirth. Scandinavian Journal of Caring Sciences 2004;18:368-75.
61. Hildingsson I, Thomas JE. Women's perspectives on maternity services in Sweden: processes, problems, and solutions. Journal of Midwifery and Women's Health 2007;52:126-33.
62. Dahlen H, Barclay L, Homer CSE. The novice birthing: theorising first-time mothers' experiences of birth at home and in hospital in Australia. Midwifery 2008;26:53-63.
63. Nilsson C, Lundgren I. Women's lived experience of fear of childbirth. Midwifery 2009;25:e1-9.
64. Lyberg A, Severinsson E. Fear of childbirth: mothers' experiences of team-midwifery care - a follow-up study. Journal of Nursing Management 2010;18:383-90.
65. Namey EE, Drapkin Lyerly A. The meaning of "control" for childbearing women in the US. Social Science & Medicine 2010;71:769-76.
66. Larkin P, Begley CM, Devane D. 'Not enough people to look after you': an exploration of women's experiences of childbirth in the Republic of Ireland. Midwifery 2012;28:98-105.
67. Seguin L, Therrien R, Champagne F, Farouche D. The components of women's Satisfaction with maternity care. Birth 1989;16:109-13.
68. Waldenström U. Experience of labor and birth in 1111 women. Journal of Psychosomatic Research 1999; 47:471-82.
69. Goodman P, Mackey MC, Tavakoli AS. Factors related to childbirth satisfaction. Journal of Advanced Nursing 2004;46:212-9.
70. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
71. Christiaens W, Bracke P. Assessment of social psychological determinants of satisfaction with childbirth in a cross-national perspective. BMC Pregnancy and Childbirth 2007;7:26.
72. Bryanton J, Gagnon AJ, Johnston C, Hatem M. Predictors of women's perceptions of the childbirth experience. Journal of Obstetric, Gynecologic, and Neonatal Nursing 2008;37:24-34.
73. Schytt E, Green JM, Baston HA, Waldenström U. A comparison of Swedish and English primiparae's experiences of birth. Journal of Reproductive and Infant Psychology 2008;26:277-94.
74. Oweis A. Jordanian mother's report of their childbirth experience: findings from a questionnaire survey. International Journal of Nursing Practice 2009;15:525-33.
75. Meyer S. Control in childbirth: a concept analysis and synthesis. Journal of Advanced Nursing 2013;69:218-28.
76. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.

77. Ford E, Ayers S, Wright DB. Measurement of maternal perceptions of support and control in birth (SCIB). Journal of Women's Health 2009;18:245-52.
78. Green JM. Commentary: what is this thing called "control"? Birth 1999;26:51-2.
79. DeClercq ER, Sakala C, Corry MP, Applebaum S. Listening to mothers II: report of the second national U.S. survey of women's childbearing experiences. New York: Childbirth Connection; 2006.
80. Gamble J, Creedy D, Teakle B. Women's expectations of maternity services: a community-based survey. Women and Birth 2007;20:115-20.
81. Hendrix M, Van Horck M, Moreta D, et al. Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:537-42.
82. Kuo SC, Lin KC, Hsu CH, Yang CC, Chang MY, Tsao CM, Lin LC. Evaluation of the effects of a birth plan on Taiwanese women's childbirth experiences, control and expectations fulfilment: a randomised controlled trial. International Journal of Nursing Studies 2010;47:806-14.
83. Parratt J, Fahy K. Trusting enough, to be out of control: a pilot study of women's sense of self during childbirth. Australian Journal of Midwifery 2003;16:15-22.
84. Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (Or it takes at least to tango). Social Science & Medicine 1997;44:681-92.
85. Noseworthy DA. Decision-making in the woman-midwife dyad: a relational undertaking (PhD thesis). Manawatū: Massey University; 2013.
86. Cooke P. Helping women to make their own decisions. In: Raynor MD, Marshall JE, Sullivan A, editors. Decision-making in midwifery practice. Edinburgh: Elsevier; 2005.
87. Edwards A, Elwyn G. Shared decision-making in health care. Oxford: Oxford University press; 2009.
88. O'Cathain A, Thomas K, Walters SJ, Nicholl J, Kirkham M. Women's perceptions of informed choice in maternity care. Midwifery 2002;18:136-44.
89. Dahlen HG, Barclay L, Homer CS. 'Reacting to the unknown': experiencing the first birth at home or in hospital in Australia. Midwifery 2010;26:415-23.
90. Howarth AM, Swain N, Treharne GJ. Taking personal responsibility for well-being increases birth satisfaction of first time mothers. Journal of Health Psychology 2011;16:1221-30.
91. DeClercq ER, Sakala C, Corry MP, Applebaum S, Hemlich A. Listening to mothers III: pregnancy and birth. New York: Childbirth Connection; 2013.
92. Entwistle VA, Watt IS. Patient involvement in treatment decision-making: the case for a broader conceptual framework. Patient Education and Counseling 2006;63:268-78.
93. Noseworthy D, Phibbs S, Benn C. Towards a relational model of decision-making in midwifery care. Midwifery 2013;29:e42-8.
94. Elwyn G, Frosch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P, et al. Shared decision making: a model for clinical practice. Journal of General Internal Medicine 2012;27:1361-7.
95. Gupta JK, Hofmeyr GJ, Shehmar M. Position in the second stage of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2012, Issue 5. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub3.
96. Kemp E, Kingswood CJ, Kibuka M, Thornton JG. Position in the second stage of labour for women with epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2013, Issue 1. Art. No.: CD008070. DOI: 10.1002/14651858.CD008070.pub2.
97. Priddis H, Dahlen H, Schmied V. What are the facilitators, inhibitors, and implications of birth positioning? A review of the literature. Women and Birth 2012;25:100-6.
98. Waldenström U, Gottvall K. A randomized trial of birthing stool or conventional semirecumbent position for second-stage labor. Birth 1991;18:5-10.
99. Marttila M, Kajanoja P, Ylikorkala O. Maternal half-sitting position in the second stage of labor. Journal of Perinatal Medicine 1983;11:286-9.
100. De Jonge A, van Diem MTh, Scheepers PLH, et al. Increased blood loss in upright birthing positions originates from perineal damage. BJOG: An International Journal of Obstetrics & Gynaecology 2007;114:349-55.
101. Logsdon MC, Davis DW. Social and professional support for pregnant and parenting women. MCN: the American Journal of Maternal Child/Nursing 2003;28:371-6.

102. Bogossian FE. Social support: proposing a conceptual model for application to midwifery practice. Women and Birth 2007;20:169-73.
103. Balaji AB, Claussen AH, Smith DC, et al. Social support networks and maternal mental health and well-being. Journal of Women's Health 2007;6:1386-96.
104. Légaré F, Stacey D. Shared decision-making: the implications for health care teams and practice. In: Edwards A, Elwyn G, editors. Shared decision-making in health care. Achieving evidence-based patient choice. Second edition. Oxford: Oxford University Press; 2009.
105. Handler A, Raube K, Kelley MA, et al. Women's satisfaction with prenatal care settings: a focus group study. Birth 1996;23:31-7.
106. Bondas T. Finnish women's experiences of antenatal care. Midwifery 2002;18:61-71.
107. Biro MA, Waldenström U, BrownS, et al. Satisfaction with team midwifery care for low- and high-risk women: a randomized controlled trial. Birth 2003;30:1-10.
108. Wong ST, Korenbrot CC, Stewart AL. Consumer assessment of the quality of interpersonal processes of prenatal care among ethnically diverse low-income women: development of a new measure. Women's Health Issues 14;2004:118-29.
109. Homer CSE, Passant L, Brodie PM, et al. The role of the midwife in Australia: views of women and midwives. Midwifery 2009;25:673-81.
110. Wheatley S. Psychological support in pregnancy. In: Clement S, editor. Psychological perspectives on pregnancy and childbirth. Edinburgh: Churchill Livingstone; 1998.
111. International Confederation of Midwives. International definition of midwife. 2011. Available from: http://www.internationalmidwives.org/who-we-are/policy-and-practice/icm-international-definition-of-the-midwife/. Accessed 15 December 2013.
112. Royal Dutch Organisation of Midwives. A new balance in midwifery care. A healthy start is an investment for life. Available from: http://www.knov.nl/samenwerken/tekstpagina/489/midwifery-in-the-netherlands/. Accessed 15 December 2013.
113. Royal Dutch Organisation of Midwives. Beroepsprofiel verloskundige 2013 [Professional profile 2013]. Available from: http://www.knov.nl/scholing-en-registratie/tekstpagina/31/beroepsprofiel/. Accessed 15 December 2013.
114. The Royal College of Physicians and Surgeons of Canada. The CanMEDS 2005 Physician Competency Framework Better standards. Better physicians. Better care. Ottawa; 2005.

2

Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study

Ans Seefat-van Teeffelen
Marianne J. Nieuwenhuijze
Irene Korstjens

Midwifery 2011; 27: e122-127

Abstract

Objective: To explore low-risk pregnant women's views on their preferences for psychosocial support from midwives during their transition to motherhood.

Design: A qualitative design with focus-group interviews and thematic analysis of the discussions.

Settings and participants: In total, 21 Dutch participants were included in three focus groups. Groups 1 (n = 7) and 3 (n = 8) consisted of pregnant women from four semi-urban midwifery practices, while group 2 (n = 6) included participants from three urban midwifery practices.

Findings: The women wanted to take responsibility for their own well-being during pregnancy. In addition to informal support, they explicitly expressed a need for professional support from their midwives when undergoing the transition to motherhood. They wanted informational and emotional support from their midwives that addressed psychological and physical changes during pregnancy. They expressed a strong desire to be informed during pregnancy of how to prepare physically and psychologically for birth, recovery and motherhood. They also wanted help with sifting and interpreting information and, ultimately, wanted to make their own choices.

Key conclusions and implications for practice: During their transition to motherhood healthy low-risk pregnant women want attentive, proactive, professional psychosocial support from midwives. They expect their midwives to oversee the transition period and to be capable of supporting them in dealing with changes in pregnancy and in preparing for birth and motherhood.

Introduction

Maternal care aims for good health outcomes for both mother and child. The World Health Organization defines health as 'a state of complete physical well-being' and as 'mental and social well-being' [1]. This broad definition is certainly applicable to the health of childbearing women. Many studies have shown that lack of mental or social well-being is a determinant of obstetric problems and has a long-term impact on the health of infants and mothers [2-6]. Pregnancy and childbirth involve many substantial changes that influence the well-being of pregnant women [7-9]. These changes can bring confusion, uncertainty, worries and loss of self-esteem [7,8,10,11]. Women report that their whole lives change after the birth of a child [8]. The transition to motherhood, therefore, may be regarded as a major life event. Although this transition is an individual experience, for most women it is a vulnerable period in their lives [8,10-12].

Nevertheless, this process also offers opportunities for self-development. In Leifer's [7] prospective study, two thirds of the women eventually experienced an increase in their self-esteem and a sense of growth, though most reported that motherhood was more stressful than they had anticipated. Several studies have reported that most women feel a need for some sort of psychosocial support during their transition to motherhood from their personal network as well as health professionals such as midwives [8,10,12-15]. Compared with informal support, formal support from a health professional may bring with it certain advantages, such as expert information, relative anonymity and no demands for reciprocity [16]. Professional psychosocial interventions during pregnancy have been associated with less concern, more satisfaction with care and a higher sense of control [17]. Pregnant women may differ in their preferences for the amount of psychosocial support and the topics to be addressed, depending on their individual characteristics, situations, sociocultural contexts and support from their personal networks [18]. To reach an optimal effect, psychosocial support should be integrated into routine midwifery care, giving all women access to support during the transition to motherhood. According to midwives and their professional organisations, psychosocial support is self-evidently a necessary part of midwifery care, and they emphasise that the midwifery model of care should include monitoring of psychological and social well-being of both the woman and her family [19,20]. However, precisely what is involved in psychosocial support remains ambiguous. The main goal of such support is to enhance the well-being and meet the needs of the recipient [21-23]. In several studies investigating the experiences of pregnant women with the care on offer, women saw a personal and humane approach as very important [14,24-27]. They also wanted reassurance, advice, the chance to communicate their concerns, answers to their questions, and the possibility to make their own choices (i.e. patient-centred decision-making) [14,24,26,27]. To date, however, most studies have asked women only about their satisfaction with the midwifery care they have already received. In contrast, this study used a demand-driven approach in which pregnant women were asked to indicate what type of midwifery care they would prefer during their transition to motherhood. The

study focused on an overall healthy population, in whom the transition to motherhood is not complicated by psychosocial or obstetric problems.

In the Dutch obstetric care system, midwives are responsible for the care of healthy pregnant women, giving both medical care and psychosocial support throughout the pregnancy, birth and postnatal period. The medical care is defined in the Verloskundig Vademecum [Obstetric Manual] [28], which includes a list of obstetric indications for referral from primary to secondary care. Far less, however, is known about the psychosocial needs of healthy, pregnant women. This focus-group study aimed to gain insight into the wants and needs of healthy pregnant women with regard to psychosocial support in prenatal midwifery care. The goal was to explore their views on the topics, actions, methods and preconditions of psychosocial support in an effort to help midwives optimally meet their clients' needs during the transition to motherhood.

Methods

Design

Focus-group interviews were conducted to explore participants' wants and needs for psychosocial support from their midwives to enhance their well-being during the transition to motherhood.

Settings and participants

Three focus groups were assembled in May and June 2005, consisting of 21 participants. Groups 1 (n = 7) and 3 (n = 8) consisted of pregnant women from four midwifery practices in Breda (semi-urban; 1000–1499 households/km^2), while group 2 (n = 6) included participants from three midwifery practices in Amsterdam (urban; at least 1500 households/km^2). The practices recruited potential participants by informing eligible pregnant women about the study both verbally and via a letter. It was emphasised that participation was strictly voluntary and confidential. The inclusion criteria were: at least 18 years of age, fluent in Dutch, pregnancy stage of between 26 and 36 weeks, and attendance at a minimum of three prenatal midwifery care visits at the time of the focus group. Midwifery professionals (e.g. midwives, general practitioners or gynaecologists) were excluded. Of the 75 women who expressed interest, the first author was able to contact 70. During this first contact, the author checked whether the participants understood the written information and met the selection criteria, and addressed any questions about the study. The socio-demographic characteristics and pregnancy details of those who were able and willing to participate at specific times and locations were subsequently recorded. Twenty-two women declined because they perceived the specific time as inconvenient, 1 woman declined because her mother recently died, 1 woman did not like a group discussion, and 1 woman was in hospital for preterm labour.

Of the 45 women who were eligible, gave informed consent and expected to be able to participate, it was possible to schedule 29 for the focus groups, balanced for age, gravidity and educational level. They were informed about the meeting in writing and later received a reminder by telephone. The other 16 women were sent a letter to inform them that it was not possible to schedule them in a balanced focus group at a specific time and location, and thanking them for their interest. Eventually, eight of the 29 scheduled women did not show up at the focus groups. Some of them telephoned that they could not find a babysitter or did not feel well. The 21 women who actually attended received a gift voucher after participating.

Data collection

Data were collected according to principles and guidelines for conducting focus groups [29]. The same two-hour format was used in each meeting and all meetings were audiotaped. The first author moderated the groups and two observers took field notes and completed a debriefing form afterwards. Neither the moderator nor the observers, all experienced midwifery professionals, were personally or professionally related to the participants. A semi-structured interview guide was used to help maintain focus in the groups.

First, the context of our study was introduced by exploring the participants' experiences in their transitions to motherhood thus far. Second, the women's preferences for their midwives' psychosocial support during this transition were addressed: topics and actions (what kind of support for which changes), methods (how), and preconditions (in what context). For each theme, conversationally worded open questions were formulated to obtain some uniformity in how the questions were asked in the different focus groups. The questions ensued from the literature and brainstorming sessions with researchers, midwives and pregnant women. To check their validity and applicability, the questions were then orally pretested for comprehensibility, simplicity and clarity with midwifery professionals and potential participants. After the moderator gave a brief introduction to the focus group, these questions and their overarching themes became the focus of discussion. The moderator stressed her neutrality by exploring both the positive and negative remarks by the participants. At the end of each meeting, the moderator invited the participants to provide feedback on the discussion and to verify a short oral summary (member check). Directly thereafter, the moderator and observers discussed their findings and identified areas that called for more in-depth exploration in the next interview. Later, the participants were mailed a summary of the focus group findings and invited to comment, but none did so.

Analysis

All audiotaped meetings were transcribed verbatim, and then subjected to a thematic analysis. The data were categorised based on background literature, the research questions and the data itself. The categories that emerged were then restructured and refined

through sequential and retrospective searching of the transcripts and the data were compared and contrasted within and among the interviews. The first author analysed all interviews, developing the coding scheme in co-operation with the other researchers. Quotes were translated into English by an accredited native-speaking translator, then, retranslated into Dutch by the third author. Credibility was further ensured by using transcripts of the audiotaped interviews, field notes and debriefing forms (methodological and data triangulation) [30]. Throughout the study several investigators reflected on the research process (investigator triangulation). Transferability was ensured by providing descriptive data of the study context (thick description) to enable readers to evaluate whether the findings are transferable to other care contexts [30]. Finally, the second author carried out a dependability and confirmability audit [30], checking whether the analysis was in line with accepted standards and examining the analysis process and records for accuracy. The audit report is available upon request.

The qualitative findings from the focus groups are presented as descriptive summaries and interpretations of the key themes identified, supported and illustrated by quotes from the raw data. Behind each quote the ID number of the participant and her focus group is given.

Socio-demographic data were analysed with descriptive statistics using SPSS, version 13.0 (SPSS Inc. Chicago, IL, USA).

Findings

The participants' ages ranged from 22 to 43 (median 33 years; n = 21). Thirteen women were expecting their first child and eight had already experienced childbirth once or twice. Five had an intermediate educational level and 16 a high level (11 bachelor's and 5 master's degrees). The participants in focus groups 1 and 3 were living in a medium-sized town (n = 11) or village (n = 4), while all participants in focus group 2 (n = 6) were living in a city.

At the start of each focus group discussion, these participants shared their experiences with the transition to motherhood, and how these influenced their well-being. Next, they talked about what kind of psychosocial support they preferred from their midwives (topics and actions), e.g. encouragement in dealing with psychological changes. They discussed how midwives could support them best (methods), e.g. tailored to each woman. Finally, the participants addressed the context (preconditions) for psychosocial support, e.g. accessibility and continuity of care. The headings of the following sections represent the key themes in these discussions.

Preferences for psychosocial support from midwives: topics and actions

Almost all participants agreed that becoming a mother was a turbulent phase in their lives. They indicated that their well-being during pregnancy was influenced by feelings of happiness as well as insecurity. These feelings were caused by the emotional, social and physical changes during pregnancy and by the prospect of changes during birth and parenthood:

> "Yes, you know what you have and don't know what you're gonna get. How will it change … So I'm scared I won't like it but there's no way back." (13-2)

Nearly all women emphasised that receiving support during the transition to motherhood from their relatives and professionals was very important. They wanted their midwives to proactively ask about their wants and needs. They wanted support in dealing with the psychological, physical and (to a lesser degree) social changes during pregnancy. They also wanted their midwives' support in preparing for childbirth and motherhood. Preferences for the scope and the intensity of this support varied, depending on differences in feelings and coping behaviour.

Support for changes in pregnancy

Concerning psychological changes (e.g. affective changes, worries, and bonding with the child), the women preferred that midwives facilitated communication about these changes, by actively asking how they felt, listening to them, reassuring and encouraging them, and by explaining that these changes were natural in the transition to motherhood:

> "The last couple of weeks were really intense … outbursts of anger, crying fits … I don't need to sit there for an hour and be able to say my piece, but it would have been good if they'd asked, you know. Like: 'So how are you coping emotionally? Do you notice any changes? Can you cope?'" (9-2)

When the women were worried about their own health or that of their baby, discussing their worries with the midwife was not enough. They also wanted further check-ups (e.g. listening to the foetal heartbeat, an ultrasound examination) so that they could personally see or hear that things were fine:

> "If you worry, people shouldn't talk around it … it's very important that you are supported in it … if you feel something is not right … then we'll look into it … " (3-1)

The women also perceived these check-ups as helpful in bonding with the baby. Moreover, they appreciated midwives who stimulated bonding by advising them to foster mindfulness during pregnancy and take the time to make contact with the baby in the womb.

Although the women experienced social changes (e.g. changing relationships and work issues), the need for professional support in this field seemed limited.

When they experienced physical changes, the women wanted their midwives to be accessible and take them seriously. Reassurance alone was not enough. They preferred that their midwives gave them adequate information about and advice for handling their complaints, and referred them to other healthcare professionals if necessary. Women also wanted their midwives to provide information on healthy behaviour to prevent physical complaints:

> "… I was prone to fainting for a while … then at the midwifery practice, they would reassure you … it's part of it and can't do any harm. While what I really needed was something to hold on to how I can prevent it and what should I do when I feel I will faint." (8-2)

Preparation for childbirth

The participants felt that preparation for the birth was not a priority for midwives. However, both the primigravida and multigravida women expressed a strong need to be informed during pregnancy on how to prepare physically and mentally for the birth, as well as on birthing positions, place of birth, pain relief and support during labour. Furthermore, they wanted midwives to provide support that would help strengthen their self-confidence:

> "But if we're talking about midwifery support, I'm a little surprised that the midwife doesn't ask me about it all. She didn't ask me what I do to get prepared. Or: you don't need to prepare … just see, or: it's better to get prepared …" (10-2)

Preparation for motherhood

The women wanted midwives' support in preparing for motherhood and the postbirth period. Alongside practical information, they wanted to know what kind of support they could expect from professionals after the birth. The multigravida women remarked that it was very important for midwives to raise pregnant women's awareness of their new responsibilities as a mother, and to give women realistic information about the physical and psychological recovery period after birth:

> "They should prepare you, it might be disappointing … there you are, with a child … that you don't need to feel guilty about it or anything. 'Cause it will all pass, of course you love the baby with heart and soul, but this is also part of it, but of course they don't say much about that." (16-3)

Preferences for psychosocial support from midwives: methods

The women wanted to take responsibility for their own well-being during the transition to motherhood. However, they felt that actually taking this responsibility was difficult because everything was new to them:

> "Well, yeah, I think it's your own responsibility to ask the questions … After all, she can't read my mind, so if I have questions it's logical I should ask them and she must be able to provide good answers." (12-2)

> "… it's also my responsibility, 'cause when she asks 'Do you have anything to ask me?', I say no, while before the consultation I really … do have things to ask …" (7-1)

Tailored care

The participants thought that psychosocial support should be tailored to each pregnant woman individually, because they may differ in, for example: personality, expectations and experiences in general. They wanted midwives to try to understand each woman by observing her or by posing questions:

> "… assessing … that's a real challenge I guess." (11-2)

> "… asking … when you have your first consultation … test what type of person you are …" (11 and 8, 9, 13-2)

> "But you can also ask directly: 'do you feel the need to' … or are you … someone who… what are your expectations … ask specifically …" (11 and 8, 9, 13-2)

Informed choice

The women indicated that they wanted personal information:

> "But then it's also personal … then it would be advice for me … if I look something up on the internet or in a book, then it's so general … now we're talking about me … Then you accept it more easily I guess." (21 and 18, 20-3)

The participants felt that more standard information about, for instance: preparation for childbirth and breastfeeding could be discussed in groups. Written information was only useful as a summary of personally delivered information or as standard information. The women indicated lacking the time and skills to select reliable information, and preferred midwives to support them on the condition they would be neutral and would highlight issues from multiple sides. Further, they wanted information and choices to be offered at the right moment for each individual woman. They suggested that midwives could use a

flexible checklist with possible topics (e.g. by discussing with women when these topics would be addressed).

In general, the women preferred a non-directive style of support. A few felt that the midwife could be directive once in a while, depending on the situation (e.g. during an emergency). However, all ultimately wanted to make their own choices:

> "… that this choice would really be more like a genuine choice … with breastfeeding … I really feel that that's forced on you …" (7-1)

> "… you have the choice … but I felt it was steered and not always respected … not so much by the midwife but by the world at large …" (7-1)

Personal approach

All participants wanted to be supported in a personal way. They preferred an empathic midwife who shared their unique experience with them and did not want to be treated as a number:

> "At the ultrasound centre I met one of the midwives from the practice I attended … I was with my two kids and a niece … and she sees me and says … that's one more than I know of, isn't it? … I hadn't seen her in almost 18 months [surprised] and she just knew that I have two children … I'm back again, and just love the convivial atmosphere here … it feels great …" (21-3)

Preferences for psychosocial support by midwives: preconditions

The women said a good relationship with their midwives, based on trust, respect, and equality, was essential for sharing personal feelings and, consequently, psychosocial support:

> "… it's not only a matter of time … it also depends who I'm dealing with … how busy it is in the waiting room …" (7-1)

They also saw the accessibility and continuity of care as important preconditions for psychosocial support. Both the primigravida and multigravida wanted more contact with their midwife in early pregnancy. Specifically, they first wanted more support in health behaviour and risk assessment. Second, they wanted more advice on practical issues. And last, they felt an increased need for confirmation during the first four to five months of pregnancy:

> "… in the beginning you don't see or feel anything, and then four weeks is a very long time." (21-3)

Most women neither knew nor cared about the exact duration of the antenatal visits, but it was important for them to feel that there was enough time to discuss what was on their minds. In general, they needed extra time to discuss more than just the essentials:

> "… not only a medical check, but also just the information …. What happens to your body? What happens mentally? Ailments you can get … extensive explanations about that kind of thing … then I would see the added value, but now I don't think of it as more than a business-like visit." (13-2)

During pregnancy most of the women thought being supported by a small team of midwives was acceptable on three conditions. First, they wanted to have met the midwife before she would assist them during the birth. Second, they wanted the midwives to be consistent in their procedures. Last, they felt that all caregivers involved should have access to their personal file:

> "I think that the notes … are so clear to them that another midwife can easily take over the next consultation … that I always feel … even though I see other women … it's OK … they know who I am, they know about my case …" (12-2)

The women wanted easy access to support during pregnancy. Access to medical support, they felt, seemed much easier than access to psychological support. When a pregnant woman had a negative experience, both the client and midwife seemed more prepared to lower the threshold for non-medical support.

> "… that I'm welcome and can ask anything, even the smallest details … that they really make me feel confident … that everything is fine … reassure me …" (3-1)

> "… I have … the feeling that they pay more attention to me now than in a previous pregnancy because something went wrong." (3-1)

> "… that they make me feel it's no problem at all to ask another question … and call them once more." (3-1)

The women valued a good atmosphere in which they felt they had time to share their concerns and pose questions to an attentive and patient midwife. They also thought that exchanging experiences with other pregnant women or mothers (in a group) could also be helpful.

> "… I like … exchanging experiences … and being reassured by other pregnant women, so that you can … share … the emotion … or the experience [more] than what I often hear now: a kind of clinical explanation of what is physically going on." (8-2)

Discussion

The pregnant women in our study were conscious of the impact of changes during pregnancy on their well-being. They wanted to take responsibility for their own well-being, but also needed support because they felt that everything was new to them. In addition, they clearly expressed a need for support from their midwives in undergoing the transition to motherhood. In addition to a recent study [12], reporting that pregnant women wanted support from their mothers, partners and peers, our study showed that they also wanted professional support. In contrast to Logsdon and Davis [21], we found that even women who were receiving adequate informal social support wanted additional professional support. This is in line with earlier studies [8]. Bondas [14], too, reported that it was important for women to talk to their midwives about their problems in life, fears of giving birth or intimate concerns they did not want to share with their partners or close friends.

The women in our study wanted informational and emotional support from their midwife with a focus on psychological and physical changes. They regarded mere medical check-ups as insufficient. They wanted information about what was actually happening to them, the course of these changes and information on how to deal with them. In addition, they wanted help sifting and interpretation information; earlier studies also found this to be a major concern for women in which midwives could play an important role [13,14].

Concerning preparation for the birth itself, the women expressed a strong desire to be informed about how to prepare physically and mentally. This is in accordance with Arizmendi and Affonso [31], who reported that concerns about the labour and delivery process were some of the most intense sources of stress during pregnancy. The multigravida women in our focus groups remarked that it was very important for midwives to raise pregnant women's awareness of their responsibilities as mothers, and to inform the women about the physical and psychological recovery in the postnatal period. These findings are in line with Nelson's meta-synthesis [11] and Wilkins' study [15] showing that women were overwhelmed by and largely unprepared to deal with maternal transition. This implies the need for a proactive approach from midwives aimed at creating realistic expectations of the postnatal period, and for antenatal programmes to better prepare mothers.

The women in our study wanted their midwives to be proactive and accessible in their support, but found that this was not always the case. Nowadays, due to changes in family structures, mothers or sisters are less directly available [23]. This might explain why the participants in our study stressed that they wanted their midwives to support them in dealing with the straining period pregnancy can be. As regards psychological support, the women were unanimous in wanting to be taken seriously in every aspect they were concerned about. They wanted their midwives to genuinely listen and, if necessary, take action, such as providing extra check-ups. They wished that midwives showed a real interest, reassured them and aimed to help strengthen their self-confidence. This demand

should not be taken lightly. Several earlier studies [11,13,14] emphasised that a negative approach from health professionals can decrease women's confidence and increase anxiety and feelings of being hurt. Our study showed that support should be tailored to women's individual needs, information handed neutrally, and issues highlighted from multiple sides. Ultimately, the women wanted to make their own choices.

The women also wanted more contact with their midwives in early pregnancy, support for health behaviour, risk assessment, and advice on practical issues. During their antenatal check-ups they wanted enough time to discuss what was on their mind – more than just the essentials, in other words. In fact, they were very explicit about this, which confirms earlier findings [14,24].

Within the concept of social support, Bogossian [23] distinguished four subtypes: emotional, informational, tangible and comparison support. In many ways the pregnant women in our study emphasised the important role of midwives in providing informational support. They wanted their midwives' emotional support as well, such as reassurance, companionship and a real interest in their needs and wishes. Finally, they also mentioned the need for tangible and comparison support, but this seemed to be less prominent.

The focus-group design offered good opportunities to explore the perspectives of a specific population on a topic not previously investigated. To our knowledge, our study is the first to provide in-depth insight into healthy low-risk pregnant women's needs for psychosocial support from their midwives during the transition to motherhood. In this regard, the study has several strengths that should be mentioned. Instead of asking women about their satisfaction with midwifery care retrospectively, we used a demand-driven approach by asking pregnant women to indicate what midwifery care they would need or prefer during their transition to motherhood. The interviews were conducted and analysed by an experienced midwife, who was independent of the midwifery practices involved. We ensured credibility by way of transcripts and written notes, and transferability by providing descriptive data of the study context. An audit confirmed the dependability and confirmability of the findings. The women in the third focus group primarily confirmed the findings of the two earlier focus groups. We included women at pregnancy stages of 26 to 36 weeks (i.e. who were actually facing imminent transition to motherhood), while one third of our participants were primipara and multipara women who could reflect on their earlier transition experiences. Lastly, we interviewed women aged 22 to 43 from different midwifery practices in different urbanisation areas.

One limitation was that women with low educational levels and immigrants were under-represented. However, the focus groups yielded rich, in-depth information, which may feed further quantitative research. For example, further research about the views of pregnant women undergoing the transition to motherhood should collect more detailed information on antenatal interventions preparing them for the challenges of the postpartum period, or on desired midwifery support in decision making. These needs

might differ between women according to socio-demographic characteristics, pregnancy phases and topics. Moreover, longitudinal quantitative research might provide detailed information on developments in the women's needs during the transition process.

For midwifery practice, our study showed that during their transition to motherhood healthy low-risk pregnant women want attentive, proactive, professional support from their midwives. They expect that their midwives to oversee the whole transition period and to be capable of supporting them in dealing with changes in pregnancy, and in preparing for birth and motherhood.

Acknowledgements

The authors would like to acknowledge the support of the Royal Dutch Association of Midwives (KNOV), in particular Pien Offerhaus MSc. The authors also like to thank the four midwifery practices in Breda and three in Amsterdam, the Netherlands. Finally, we thank the participating pregnant women in these practices for sharing their time and thoughts with us.

References

1. World Health Organization. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946, and entered into force on 7 April 1948.
2. Jasinski JL. Pregnancy and domestic violence: a review of the literature. Trauma, Violence and Abuse 2004;5:47-64.
3. Van den Bergh BRH, Mulder EJH, Mennes M, Glover V. Antenatal maternal anxiety and stress and the neurobehavioural development of the fetus and child: links and possible mechanisms: a review. Neuroscience and Biobehavioral Reviews 2005;29:237-58.
4. Jørgensen T, Mortensen LH, Andersen AMN. Social inequality in fetal and perinatal mortality in the Nordic countries. Scandinavian Journal of Public Health 2008;36:635-49.
5. Lazinski MJ, Shea AK, Steiner M. Effects of maternal prenatal stress on offspring development: a commentary. Archives of Women's Mental Health 2008;11:363-75.
6. Li D, Liu L, Odouli R. Presence of depressive symptoms during early pregnancy and the risk of preterm delivery: a prospective cohort study. Human Reproduction 2009;24:146-53.
7. Leifer M. Psychological changes accompanying pregnancy and motherhood. Genetic Psychology Monographs 1997;95:55-96.
8. Barclay L, Everitt L, Rogan F, Schmied V, Wyllie A. Becoming a mother: an analysis of women's experience of early motherhood. Journal of Advanced Nursing 1997;25:719-28.
9. Sjöström H, Langius Eklöf A, Hjertberg R. Well-being and sense of coherence during pregnancy. Acta Obstetricia et Gynecologica Scandinavica 2004;83:1112-8.
10. Bondas T, Eriksson K. Women's lived experiences of pregnancy: a tapestry of joy and suffering. Qualitative Health Research 2001;11:824-40.
11. Nelson AM. Transition to motherhood. Journal of Obstetric, Gynecologic, & Neonatal Nursing 2003;32:465-77.
12. Darvill R, Skirton H, Farrand P. Psychological factors that impact on women's experiences of first-time motherhood: a qualitative study of the transition. Midwifery 2010;26:357-66.
13. Oakley A. Perspectives of users of the services. International Journal of Technology Assessment in Health Care 1992;8 Suppl 1:112-22.
14. Bondas T. Finnish women's experiences of antenatal care. Midwifery 2002;18:61-71.
15. Wilkins C. A qualitative study exploring the support needs of first-time mothers on their journey towards intuitive parenting. Midwifery 2006;22:169-80.
16. Shumaker SA, Brownell A. Toward a theory of social support: closing conceptual gaps. Journal of Social Issues 1984;40:11-36.
17. Enkin M, Keirse MJNC, Neilson J, et al. Guide to effective care in pregnancy and childbirth. 3rd edn. Oxford: Oxford University; 2000.
18. Wheatley S. Psychological support in pregnancy. In: Clement S, editor. Psychological perspectives on pregnancy and childbirth. Edinburgh: Churchill Livingstone; 1998.
19. ICM. Essential competences for basic midwifery practice 2002. Available from: www.internationalmidwives.org. Accessed 29 April 2009.
20. KNOV. Beroepsprofiel verloskundige 2005. Available from: www.knov.nl. Accessed 29 April 2009.
21. Logsdon MC, Davis DW. Social and professional support for pregnant and parenting women. MCN: the American Journal of Maternal Child/Nursing 2003;28:371-6.
22. Balaji AB, Claussen AH, Smith DC, Visser SN, Johnson Morales M, Perou R. Social support networks and maternal mental health and well-being. Journal of Women's Health 2007;6:1386-96.
23. Bogossian FE. Social support: proposing a conceptual model for application to midwifery practice. Women and Birth 2007;20:169-73.
24. Handler A, Raube K, Kelley MA, et al. Women's satisfaction with prenatal care settings: a focus group study. Birth 1996;23:31-7.
25. Biro MA, Waldenström U, Brown S, Pannifex JH. Satisfaction with team midwifery care for low- and high-risk women: a randomized controlled trial. Birth 2003;30:1-10.
26. Wong ST, Korenbrot CC, Stewart AL. Consumer assessment of the quality of interpersonal processes of prenatal care among ethnically diverse low-income women: development of a new measure. Women's Health Issues 14;2004:118-29.

27. Homer CSE, Passant L, Brodie PM, et al. The role of the midwife in Australia: views of women and midwives. Midwifery 2009;25:673-81.
28. Verloskundig vademecum 2003. Available from: www.cvz.nl. Accessed 29 April 2009.
29. Morgan DL, Krueger RA. The focus group kit. Thousand Oaks: Sage; 1998.
30. Guba EG, Lincoln YS. Naturalistic inquiry. Newbury Park: Sage; 1985.
31. Arizmendi TG, Affonso DD. Stressful events related to pregnancy and postpartum. Journal of Psychosomatic Research 1987;31:743-56.

3

Factors influencing the fulfillment of women's preferences for birthing positions during second stage of labor

Marianne J. Nieuwenhuijze
Ank de Jonge
Irene Korstjens
Toine Lagro-Janssen

Journal of Psychosomatic Obstetrics & Gynecology 2012; 33(1): 25-31

Abstract

Having choices and being involved in decision-making contributes to women's positive childbirth experiences. During a physiological birth women's preferences can play a leading role in the choice of birthing positions. In this study we explored women's preferences with regard to birthing positions during second stage of labour, with a special focus on women who preferred positions other than common supine positions. A questionnaire survey was conducted among women in 54 Dutch midwifery practices. Of the 1154 women in the study, 58.9% preferred supine positions, 19.6% preferred other positions (e.g. sitting or standing), and 21.5% had no distinct preference. Women who preferred supine positions gave birth in these positions more often than women with preferences for other positions. Among the women having a preference for other positions, the actual fulfilment of their preference was related to longer duration of second stage of labour, higher levels of education, the strength of the preference, and giving birth at home. These results demonstrate differences in women's use of preferred positions during childbirth. Midwives can contribute to women-centred care by proactively exploring women's preferences for birthing positions throughout pregnancy and birth, supporting women in developing well-informed choices and facilitating these choices where possible.

Introduction

Most women want to have an active role in the care they receive during pregnancy and birth [1-4]. Having choices and being involved in decision-making contribute to their sense of control and to more positive birth experiences [5-7]. These insights are important to a women-centred model of care, underscoring the need for midwives and other caregivers to support women in their choices by discussing women's preferences and facilitating them to act upon their choices, specifically when birth is progressing physiologically [8].

Having a choice in birthing positions during second stage of labour is an example in which women's personal preference can play a leading role. Two meta-analytic reviews compared supine birthing positions with other positions, such as upright and lateral positions [9,10]. Both reviews concluded that women should be encouraged to give birth in positions they find most comfortable. The results showed benefits of positions other than supine, including shorter duration of second stage, a decrease in instrumental deliveries and episiotomies, fewer abnormal foetal heart rate patterns, and reduced pain. However, no benefits were found for Apgar score or need for neonatal resuscitation. The meta-analyses reported decreased estimated blood loss and lower rates of postpartum haemorrhage in supine positions. On the other hand, in a cohort study these outcomes were only significant increased among women with perineal trauma using upright positions [11]. Both meta-analyses identified that the overall quality of the included studies was poor and the conclusions should be interpreted with caution [9,10]. In a qualitative study [12], women said that being encouraged to find the most suitable positions during labour contributed to their feelings of being in control, which they described as being important for a positive birth experience and their emotional well-being afterwards. Quantitative studies have also shown associations between birthing positions and psychological outcomes [7,13,14]. Being able to choose birthing positions increased women's feelings of being in control and upright positions encouraged active involvement of their partners. These findings suggest that in birthing positions, women's personal choices and preferences can be decisive: there is no dominant medical reason for the routine use of a specific position.

However, the environment has a profound influence on the birthing process [15] and the likelihood that women will use certain birthing positions [16-18]. Over the centuries the supine birthing position has become the standard, in large part because it is more convenient for caregivers [19]. If women give birth in a non-prescriptive environment where they are encouraged and supported to choose themselves, women tend to use a variety of positions during second stage of labour [20-22]. In promoting use of preferred birthing positions, midwives can support women. Therefore, midwives need to pay special attention to factors that hinder women from realizing their choice in birthing position, identifying those factors that prevent and facilitate women's preferences.

Limited literature is available on the relationship between preferences and the actual use of birthing positions. Lugina [23] found that more than 80% of the Tanzanian women in

her study had a preference for supine positions. The fulfilment of women's individual preferences and factors related to this were not described. In the research presented here we aimed to investigate how preferences and actual use of birthing positions were related in individual women, especially in women with a preference for other than the more common supine positions. We examined pregnant women's preferences and their birthing positions in midwifery practices: Which positions were preferred, and did women use their preferred positions even if these were other than supine positions? Which factors were related to using the preferred positions?

Methods

Setting and participants

A questionnaire survey was conducted in Dutch primary care midwifery practices between October 2005 and December 2007. Midwifery students from the four midwifery academies in the Netherlands volunteered to collect data during their clinical placements in primary care. In addition, all Dutch practices (n=487) were invited by letter to participate in the study. After a total of 54 midwifery practices agreed to participate we sent no reminders because the practices that volunteered were sufficiently spread throughout the Netherlands and covered urban, semi-urban and rural areas.

Shortly after birth, midwives gave eligible primiparous and multiparous women an information letter about the aim and content of the study and invited them to participate. The two inclusion criteria were: sufficient command of the Dutch language to fill out the questionnaire, and having received midwife-led care until the start of the second stage of labour. Participation was strictly voluntary and the data were kept confidential. Women were asked to fill out the questionnaire at their homes in the first week after birth. They returned the questionnaire in a sealed envelope to their midwives. Within the same time span the midwives who attended the birth of these women completed a separate questionnaire.

Data were only used from women with a physiological pregnancy and birth, whereby a primary care midwife was the lead professional and responsible for the care throughout the birth. These midwives do not use any medical interventions such as epidural anaesthesia, augmentation, continuous foetal monitoring or instrumental birth.

Upon consultation, the Medical Ethics Committee of the region Arnhem-Nijmegen stated that ethical approval was not necessary because of the non-invasive character of the study.

Data collection

Two separate questionnaires (available in English from the first author) were used: one questionnaire filled out by the women and one by the midwives.

The questionnaire completed by the women included questions about their preferences for birthing positions, the birthing positions used during the second stage of labour and at the moment of birth, and socio-demographic and labour factors known to be related to birthing positions. Birthing positions were defined as: supine (recumbent or semi-recumbent positions), lateral, sitting (>45° from the horizontal), squatting, standing, birthing shell (a plastic plateau giving support to women in squatting position), birthing stool, hands and knees, and bath [9,10]. Each woman was asked to indicate her preference in pregnancy. For each birthing position she could score whether she intended to (1) *certainly* use the given birthing position, (2) *possibly* use the given position, or (3) *definitely not* wish to use it. In another question the woman could mark the positions she had used during second stage of labour and at the moment of birth on a written list of possible positions. Women were also asked whether they had received information about birthing positions during pregnancy from their midwife and during antenatal classes.

The separate questionnaire for the midwives consisted of questions about socio-demographic characteristics, pregnancy and birth factors. This questionnaire was used for verification of data, replacing missing data, and for additional information on place of birth and referral to the obstetrician, data that were not available on the questionnaire the women filled out. We were unable to follow up with non-responders because of limited resources.

The results reported in this article are based primarily on the answers provided by the women.

Data analysis

For the analysis, birthing positions as reported by the women were grouped together as 'supine positions' or 'other positions' [9,10]. For each woman, we also distinguished the direction of her preference ('preference for supine' or 'preference for other') and the strength of her preference ('strong' or 'mild'). Thus, four categories for women's preferences were defined (Table 1). 'Use' was defined as having used a position at some time during the second stage of labour.

Descriptive analyses were conducted. Chi-square tests and multiple logistic regression analyses were conducted to investigate which factors influenced the actual use of the preference. As we were especially interested in women with a preference for positions other than the common supine positions, a separate logistic regression analysis was conducted for the group of women with a preference for other birthing positions. The following independent variables – chosen on theoretical or clinical grounds – were used in our analysis: women's characteristics (Table 2), having received information on birthing positions in antenatal classes (yes/no) or from midwife (yes/no), feelings towards birth (scale 0 to 10), preference for birthing positions ('supine' or 'other'), strength of preference ('strong' or 'mild') and duration of second stage (<10 minutes, 10-60 minutes, >60 minutes). These factors were entered into a logistic regression model using manual backward

Table 1 Categories for direction and strength of preference.*

Categories	Supine positions	Other positions**
1. Strong preference for supine positions	certainly use	definitely not use
2. Mild preference for supine positions	certainly use	possibly use
	possibly use	definitely not use
3. Mild preference for other positions	possibly use	certainly use
	definitely not use	possibly use
4. Strong preference for other positions	definitely not use	certainly use

***** Women were asked in what position(s) they were planning to give birth.
******Other positions are lateral, sitting, squatting, standing, birthing shell, birthing stool, hand and knees, bath.

stepwise selection. At each step the weakest predicting factor, based on p-value, was removed [24]. Where appropriate, we cited values for Nagelkerke R^2, estimating the proportion of variance accounted for by the model.

Statistical analyses were conducted using Statistical Package for the Social Sciences Version 15.1 for Windows (SPSS Inc., Chicago, IL, USA). Two-tailed significance tests were applied ($\alpha < 0.05$).

Results

Questionnaires of 1603 women were returned (Figure 1), for 1239 women both questionnaires were available. Of these women, 85 were excluded because they had been referred to obstetricians or because information on referral was missing, leaving 1154 for analysis.

Table 2 shows the characteristics of the women participating in the study. Nearly 75% of the women in our study were aged between 25 and 35 years, 35% were primiparous women, 93% were of Dutch origin, 20% had a low level of education, and 80% gave birth at home. Compared with the Dutch national primary care population in midwife-led care at the onset of the second stage of labour [25], the study sample contained similar percentages of women aged between 25 and 30 (30% versus 29%) and aged 35 or older (18% versus 18%) However, the study sample comprised fewer women aged <25 (8% versus 11%), more women between 30 and 35 years (43% versus 39%), more primiparous women (35% versus 32%), more women of Dutch origin (93% versus 84%), and more home births (80% versus 66%).

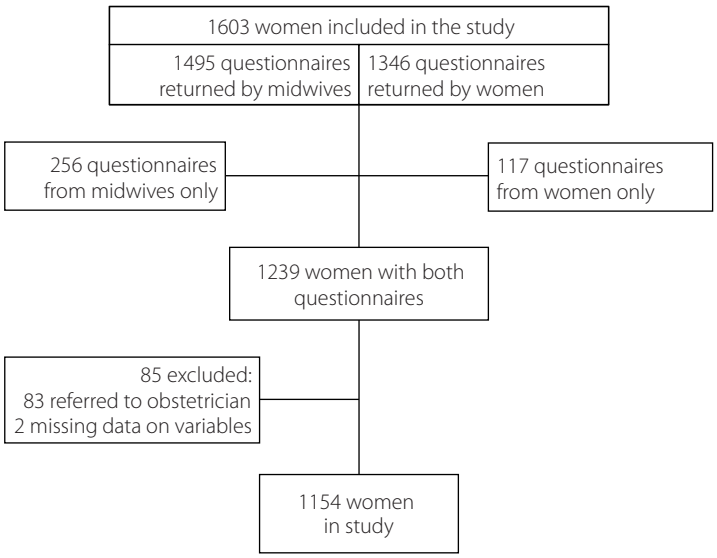


Figure 1 Flow chart of women in the study.

Table 2 Characteristics of women in the study population (n=1154).

	Participants No. (%)
Age (yr)	
< 25	91 (7.9)
25-29	350 (30.3)
30-34	498 (43.2)
≥ 35	215 (18.6)
Parity	
primiparous	404 (35)
multiparous	750 (65)
Ethnic origin (n = 1141)	
Dutch	1062 (93.1)
non-Dutch	79 (6.9)
Education (n = 1143)	
low	206 (18.0)
intermediate	477 (41.7)
high	460 (40.2)
Place of birth	
home	927 (80.2)
hospital supervised by midwife	227 (19.7)

Table 3 shows the birthing positions as they were scored by the women, indicating their preference during pregnancy. The majority of women (87%) considered using supine positions and most women used the supine position at some time during the second stage (during pushing 88%, at birth 81%). Of the other positions, women most often considered using the birthing stool (39%), and this non-supine position was most often used (during pushing 17%; at birth 9%). Nearly all women knew at least one other position. Of the women who attended antenatal classes, 80% (n=440) reported that they were informed about birthing positions during these classes, whereas only 22% (n=246) of all women reported being sufficiently informed about birthing positions by their midwives.

Table 3 Preference and use of birthing positions (n=1154).*

	Preference			Never heard of	Used position	
	certainly	possibly	not		pushing	at birth
Supine positions	751 (65.1)	252 (21.8)	63 (7.6)	10 (0.9)	1016 (88.0)	935 (81.0)
Other positions:						
lateral	43 (3.7)	238 (20.6)	456 (39.5)	103 (8.9)	159 (13.8)	22 (1.9)
sitting	61 (5.3)	234 (20.3)	466 (40.4)	65 (5.6)	75 (6.5)	29 (2.5)
squatting	20 (1.7)	131 (11.4)	684 (59.3)	33 (2.9)	25 (2.2)	3 (0.3)
standing	13 (1.1)	56 (4.9)	732 (63.4)	80 (6.9)	36 (3.1)	6 (0.5)
birthing shell	4 (0.3)	24 (2.1)	419 (36.3)	483 (41.9)	0 (0.0)	0 (0.0)
birthing stool	144 (12.5)	305 (26.4)	486 (42.1)	32 (2.8)	191 (16.6)	105 (9.1)
hand and knees	14 (1.2)	107 (9.3)	678 (58.8)	69 (6.0)	66 (5.7)	21 (1.8)
bath	46 (4.0)	116 (10.1)	782 (67.8)	3 (0.3)	38 (3.3)	33 (2.9)

*Frequencies (percentage). Numbers don't add up to 100% because women could indicate more than one preference or use more than one position.

For the logistic regression analyses, we labelled each woman's individual preference for one of four categories (Table 1). Of the 1154 women, 58.9% (n=679) had a supine preference either strong (n=287) or mild (n=392), and 19.6% (n=226) had a preference for other positions either strong (n=80) or mild (n=146). The remaining 21.5% (n=249) had no distinct preference. Figure 2 shows the number of women who actually fulfilled their preference for each of the four categories (n=905). Significant associations were found between women's preferences and the actual fulfilment of these preferences. Women with a supine preference used their preferred birthing position more often than women with a preference for other birthing positions ($p<0.001$). Women with a strong preference were more likely to use their preferred birthing position than women with a mild preference ($p<0.001$).

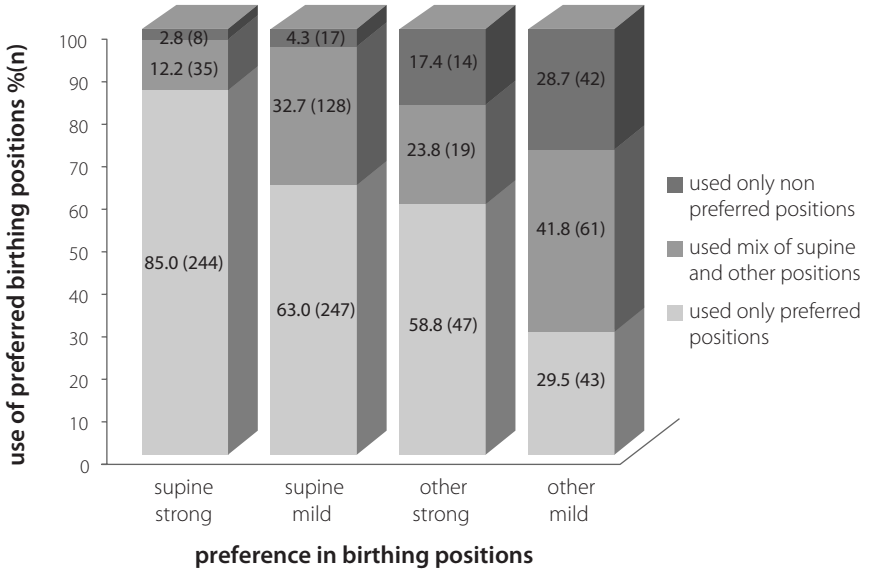


Figure 2 Used birthing position in women who expressed a strong or mild preference for supine or other positions* (n=905).

*lateral, sitting, squatting, standing, birthing shell, birthing stool, hands and knees, bath

Table 4 shows the final model of the logistic regression analysis for the factors related to using the preferred birthing positions among all women in the study. The following factors were significantly associated with using the preferred birthing position: Having a preference for supine versus other positions (OR 10.5; CI 6.21-17.74), duration of second stage of more than 60 minutes compared less than 10 minutes (OR 3.21, CI 1.15-8.91), and birth at home instead of in the hospital (OR 2.33; CI 1.3-4.18). The model explained 21.2% of the variance in the use of preferred birthing positions

In the logistic regression analysis among women with a preference for other birthing positions (Table 5), the following factors were significantly associated with the use of other birthing positions among women who preferred these positions: duration of second stage more than 60 minutes compared to less than 10 minutes (OR 4.9; CI 1.29-18.57), an intermediate or higher level of education instead of a lower educational level (OR 3.85; 1.48-10.04; OR 3.36; 1.35-8.39, respectively), and a strong preference compared to a mild preference (OR 2.27; CI 1.09-4.74). A positive trend was found for birth at home instead of in the hospital (OR 2.36; CI 0.99-5.59). Because of the limited sample size (n=222), we included only the strongest predicting factors from the previous model. The model explained 14.7% of the variance.

Table 4 Factors associated with using preferred birthing positions (n=888).*

Factor	p	OR	95% CI for OR	
			lower	upper
Supine preference	<0.001	10.50	6.21	17.74
Duration of second stage > 60 minutes	0.026	3.21	1.15	8.91
Birth at home	0.005	2.33	1.30	4.18

OR = Odds Ratio; CI = Confidence Interval.
*Factors included in the logistic regression analysis were: age, education, parity, place of birth, info antenatal classes, info midwife, feelings towards birth, preference for birthing position, duration of second stage, interaction education*info antenatal classes.

Table 5 Factors associated with using preferred birthing position among women with a preference for other than supine positions (n=222).*

Factor	p	OR	95% CI for OR	
			lower	upper
Duration of second stage > 60 minutes	0.019	4.90	1.29	18.57
Intermediate level of education	0.006	3.85	1.48	10.04
Higher level of education	0.009	3.36	1.35	8.39
Strong preference	0.028	2.27	1.09	4.74
Birth at home	0.052	2.36	0.99	5.59

OR = Odds Ratio; CI = Confidence Interval.
*Factors included in the logistic regression analysis were: age, education, parity, place of birth, strength of preference, duration of second stage.

Discussion

Most women in this study used their preferred birthing position at some time during the second stage of labour. Only 20% of the women had a preference for other than supine birthing positions. They were less likely to use their preferred birthing position, especially when they had a mild preference. Other factors associated with actual use of preferred birthing positions were: duration of second stage longer than 60 minutes; birth at home; and, for other birthing positions, higher levels of education.

A minority of women preferred other positions than supine. This might be because they were unaware of the available options for birthing positions. Although nearly all

women knew at least one other position, midwives seemed to have a minor role in giving information about birthing positions. This might have limited women's perceptions of the available possibilities. A study on maternity services has suggested that preferences are affected by what women believe to be possible [26]. In another study women indicated that the midwife's advice was by far the most important factor that influenced their choice of birthing position [12]. They said they would feel less hesitant to use more uncommon positions if these had been mentioned by the midwife during pregnancy.

Informed choice is fundamental to the midwifery model of care [8,27]. Both primiparous and multiparous women expressed a need to be informed during pregnancy by their midwife on how to prepare physically and mentally for the birth, including the use of birthing positions [3]. Women mostly prefer some form of shared decision-making, which may differ according to the type of decision or conditions under which they are made; for example, when in pain or distress [2,28]. Shared decision-making is a dynamic dialogic process, based on midwives' knowledge and the women's growing knowledge. This involves a dialogue that enables women to make and re-make choices and decisions [29].

When discussing birthing positions, contingency plans should also be discussed with women. Midwives have highlighted the importance of preparing women for the fact that birth is unpredictable: women might feel differently from how they anticipated and circumstances may necessitate the use of another position than preferred [30,31]. In this, some midwives referred specifically to women who had fixed expectations about the positions in which they wanted to give birth [31]. We found that a strong preference for other than supine birthing positions made the actual use of these positions more likely. However, being attentive to the dynamic process of giving birth and being open to changing positions during labour might be more important than using one single chosen position [17].

In our study, women with a lower level of education were less likely to use their preference for other birthing positions, suggesting inequalities in realizing one's choice. These women might have been less explicit in expressing their preference, or perhaps midwives might be less proactive in exploring the choices of these women. When thinking about and interacting with others, people tend to use internal models and sets of assumptions. Caregivers may assume that less educated women find it less important to be involved in decision-making [32,33]. However, different studies have shown that all women do want influence on decisions [2,32].

Birth at home also contributed to using the preferred position. Several studies have shown that women choose a home birth because they feel that they will be more in control [34-36]. They are more at ease and more free to follow their own preferences, not only in birthing positions but also in general. Our findings should be included in the information women receive on the merits of home versus hospital birth. Although, there is an ongoing debate on the safety of home birth [37,38], many recent studies have shown that for low-risk women, perinatal outcomes are similar between planned home and planned hospital

birth and women who start labour at home have fewer interventions and less maternal morbidity [39-43]. Moreover, women who give birth at home are most positive about their birth [44,45]. Some of the positive outcomes associated with home birth may be the result of self-selection. For example, women choosing home birth may be more motivated to avoid interventions [40,46]. Nevertheless, as our results suggest, the home environment itself may also be more conducive to allowing women to follow their own preferences. For midwives the environment is also a contributing factor. In several studies [16,17], midwives stated that their work environment influenced their tendency to use other birthing positions. Midwives who experience more autonomy in their work setting, as in the home situation, are more likely to simulate a variety of positions.

Positions such as sitting and standing are often referred to as 'alternative'. However, these positions can be seen as natural, as women tend to use various birthing positions when they are encouraged to follow their own preferences [22,47] and this contributes to their well-being [7,10,13,14,48]. Obstetric or environmental factors may be reasons for deviation from women's preferences [31]. Midwives may not always be physically able to attend to women in every position, but usually, with minor adjustments (e.g. a yoga chair, birth shell placed on the bed), more is possible, at least in the Netherlands. Additionally, birth is a dynamic process: a woman may decide that she is more comfortable in a different position than in the one she intended to use, or a midwife may judge it necessary to adjust the birthing position to stimulate the labour process. Remarkably, in our study, the duration of second stage was the strongest influencing factor in the use of other positions (Table 5). An explanation for this might be that non-supine positions are often used as an intervention to stimulate a slow second stage, preventing the need for an assisted birth or – in the Dutch situation – a referral to the obstetrician.

This study has several limitations. First, participating midwives in the study population were self-selected. Most likely, positive attitudes towards diversity in birthing positions played a part in midwives' willingness to participate. This might have led towards a more positive outcome for the use of other than supine birthing positions. In another Dutch study, only 10% of the women gave birth in other birthing positions [14]. Women were also older compared to the Dutch primary midwifery care population, which may have influenced the likelihood of using their preferred positions. Second, the questionnaire about women's preferences was filled out by women after they gave birth and this may have led to avoidance of post decision dissonance [49]; women may have responded in line with the final outcome. Nevertheless, we found a striking difference in the likelihood of realizing preferred birthing positions among women who preferred supine positions compared to women with a preference for other positions. Because of the small number of women of non-Dutch origin in our study, it is unclear to what extent our results apply to ethnic minority populations in the Netherlands.

On the other hand, the literature on preferences and use of birthing positions is very limited [23]. As far as we are aware, ours is the first study to explore the relationship between

individual preferences and actual use of birthing positions in a large sample of low-risk women. The results point to relevant implications for practice.

As the variance in preference and actual use of birthing positions was only partly explained by the factors in our final logistic regression models, future research should explore other characteristics of women and midwives, and clinical factors that play a role. This research should collect data from the women in two phases: during pregnancy and around birth. Research should also examine what effect choice in birthing position has on women, e.g. whether it enhances women's feelings of control and well-being.

In conclusion, this study showed that women with a preference for birthing positions other than the common supine positions were less likely to use these birthing positions compared to women with a preference for supine positions. Women, who preferred other positions, were more likely to use these if they had a longer duration of second stage of labour, higher levels of education, a strong preference with regard to other positions, and if they gave birth at home.

Midwives should proactively explore women's preferences for birthing positions throughout pregnancy and birth, support women in developing well-informed choices, and facilitate these choices where possible.

Acknowledgements

We thank the participating midwives, student-midwives and pregnant women in the 54 Dutch midwifery practices who made this study possible.

References

1. O'Cathain A, Thomas K, Walters SJ, Nicholl J, Kirkham M. Women's perceptions of informed choice in maternity care. Midwifery 2002;18:136-44.
2. Gamble J, Creedy D, Teakle B. Women's expectations of maternity services: a community-based survey. Women and Birth 2007;20:115-20.
3. Seefat-van Teeffelen A, Nieuwenhuijze M, Korstjens I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-7.
4. Hendrix M, Van Horck M, Moreta D, et al. Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:537-42.
5. Hodnett E. Pain and women's satisfaction with the experience of childbirth: a systematic review. American Journal of Obstetrics & Gynecology 2002;186:S160-72.
6. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
7. Green JM, Coupland VA, Kitzinger JV. Expectations, experiences, and psychological outcomes of childbirth: a prospective study of 825 women. Birth 1990;17:15-24.
8. ICM. The philosophy and model of midwifery care 2005. Available from: http://www.internationalmidwives.org/Portals/5/2010/Philosophy%20and%20model%20of%20midwifery%20care%20final%20oft2005.pdf Accessed 25 June 2011.
9. Gupta JK, Hofmeyr GJ, Smyth RMD. Position in the second of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews 2004, Issue 1. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub2
10. De Jonge A, Teunissen TAM , Lagro-Janssen ALM. Supine position compared to other positions during the second stage of labor: a meta-analytic review. Journal of Psychosomatic Obstetrics & Gynecology 2004;25:35-45.
11. De Jonge A, van Diem MTh, Scheepers PLH, et al. Increased blood loss in upright birthing positions originates from perineal damage. BJOG: An International Journal of Obstetrics & Gynaecology 2007;114:349-55.
12. De Jonge A, Lagro-Janssen ALM. Birthing positions. A qualitative study into the views of women about various birthing positions. Journal of Psychosomatic Obstetrics & Gynecology 2004;25:47-55.
13. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.
14. Van Diem MTh. De invloed van kenmerken van de vrouw en de vroedvrouw op de baringshouding. [The influence of women's and midwives' characteristics on the birthing position]. Tijdschrift voor Verloskundigen 1997;22:18-27.
15. Foureur M, Davis D, Fenwick J, Leap N, Iedema R, Forbes I, Homer CS. The relationship between birth unit and safe, satisfying birth: developing a hypothetical model. Midwifery 2010;26:520-25.
16. Hanson L. Second-stage positioning in nurse-midwifery practices. Part 2: Factors affecting use. Journal of Nurse-Midwifery 1998;43:326-30.
17. Roberts J. The "push" for evidence: management of the second stage. Journal of Midwifery and Women's Health 2002;47:2-15.
18. Walsh D. Part five: why we should reject the 'bed birth' myth. British Journal of Midwifery 2000;8:554-8.
19. Dunn PM. Francois Mauriceau (1637-1709) and maternal posture for parturition. Archives of Disease in Childhood 1991;661:78-9.
20. Rossi MA, Lindell SG. Maternal positions and pushing techniques in a nonprescriptive environment. Journal of Obstetric, Gynecologic, & Neonatal Nursing 1986;15:203-8.
21. Russell JG. The rationale of primitive delivery positions. BJOG: An International Journal of Obstetrics & Gynaecology 1982;89:712-5.
22. Hunt LM, Glantz NM, Halperin DC. Childbirth care-seeking behavior in Chiapas. Health Care for Women International 2002;23:98-118.
23. Lugina H, Mlay R, Smith H. Mobility and maternal positions during childbirth in Tanzania: an exploratory study at four government hospitals. BMC Pregnancy and Childbirth 2004;4.
24. Field A. Discovering statistics using SPSS. London: SAGE Publications Ltd; 2009.

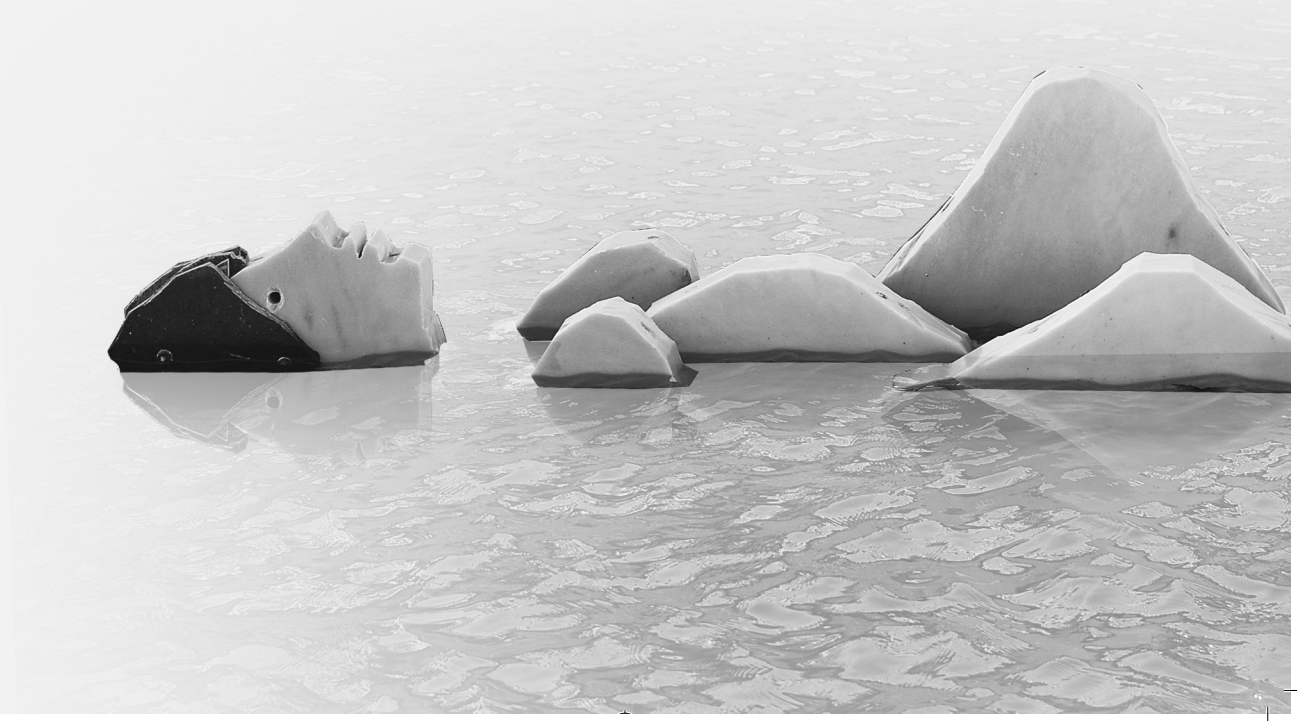
25. The Netherlands Perinatal Registry (PRN-foundation). Bilthoven; 2007.
26. Van Teijlingen ER, Hundley V, Rennie A-M, Graham W, Fitzmaurice A. Maternity satisfaction studies and their limitations: "What is, must still be best". Birth 2003;30:75-82.
27. Thachuk A. Midwifery, informed choice, and reproductive autonomy: a relational approach. Feminism & Psychology 2007;17:39-56.
28. Cooke P. Helping women to make their own decisions. In: Raynor MD, Marshall JE, Sullivan A, editors. Decision making in midwifery practice. Edinburgh: Elsevier; 2005.
29. Edwards NP. Why can't women just say no? And does it really matter? In: Kirkham M, editor. Informed choice in maternity care. Basingstoke: Palgrave Macmillan; 2004.
30. Kitzinger S. The politics of birth. Edinburgh: Elsevier Health; 2005. Chapter 11, Birth plans; p. 89-97.
31. De Jonge A, Teunissen DAM, van Diem MTh, Scheepers PLH, Lagro-Janssen ALM. Women's positions during the second stage of labour: views of primary care midwives. Journal of Advanced Nursing 2008;63:347-56.
32. Green JM, Kitzinger JV, Coupland VA. Stereotypes of childbearing women: a look at some evidence. Midwifery 1990;6:125-32.
33. Stapleton H. Is there a difference between a free gift and a planned purchase? The use of evidence-based leaflets in maternity care. In: Kirkham M, editor. Informed choice in maternity care. Basingstoke: Palgrave Macmillan; 2004.
34. Borquez H, Wiegers T. A comparison of labour and birth experiences of women delivering in a birthing centre and at home in the Netherlands. Midwifery 2006;22:339-47.
35. Johnson T, Callister L, Freeborn D, Beckstrand RL, Huender K Dutch women's perceptions of childbirth in the Netherlands. MCN: the American Journal of Maternal/Child Nursing 2007;32:170-7.
36. Dahlen H, Barclay L, Homer CSE. The novice birthing: theorising first-time mothers' experiences of birth at home and in hospital in Australia. Midwifery 2008;26:53-63.
37. Wax JR, Lucas FL, Lamont M, Pinette MG, Cartin A, Blackstone J. Maternal and newborn outcomes in planned home birth vs planned hospital births: a metaanalysis. American Journal of Obstetrics & Gynecology 2010;203:243.e1-8.
38. Evers ACC, Brouwers HAA, Hukkelhoven CWPM, et al. Perinatal mortality and severe morbidity in low and high risk term pregnancies in the Netherlands: prospective cohort study. British Medical Journal 2010;341:c5639.
39. Janssen P, Henderson A, Vedam S. The experience of planned home birth: views of the first 500 women. Birth 2009;36:297-304.
40. Hutton EK, Reitsma AK, Kaufman K. Outcomes associated with planned home and planned hospital births in low-risk women attended by midwives in Ontario, Canada, 2003-2006: a retrospective cohort study. Birth 2009;36:180-9.
41. Maassen M, Hendrix MJC, van Vugt H, Veersema S, Smits F, Nijhuis JG. Operative deliveries in low-risk pregnancies in The Netherlands: primary versus secondary care. Birth 2008;35:277-82.
42. De Jonge A, Van der Goes B, Ravelli A, et al. Perinatal mortality and morbidity in a nationwide cohort of 529,688 low-risk planned home and hospital births. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:1177-84.
43. Mol BWJ, de Jonge A, Nijhuis JG, Buitendijk SE. Thuisbevalling niet verantwoordelijk. [Home birth not responsible]. Medisch Contact 2010;65:2390-3.
44. Rijnders M, Baston H, Schönbeck Y, et al. Perinatal factors related to negative or positive recall of birth experience in women 3 years postpartum in the Netherlands. Birth 2008;35:107-16.
45. Christiaens W, Bracke P. Place of birth and satisfaction with childbirth in Belgium and the Netherlands. Midwifery 2009;25:e11-9.
46. Van der Hulst LAM, van Teijlingen ER, Bonsel GJ, Eskes M, Bleker OP. Does a pregnant woman's intended place of birth influence her attitude towards and occurrence of obstetric interventions? Birth 2004;31:28-33.
47. Carlson JM, Diehl JA, Sachtleben-Murray M, McRea M, Fenwick L,Friedman EA. Maternal position during parturition in normal labor. Obstetrics & Gynecology 1986;68:443-7.
48. Kelly FW, Terry R, Naglieri R. A review of alternative birthing positions. Journal of the American Osteopathic Association 1999;99:470-4.
49. Festinger L. A Theory of cognitive dissonance. Stanford: Stanford University Press; 1957.

4

Influence on birthing positions affects women's sense of control in second stage of labour

Marianne J. Nieuwenhuijze
Ank de Jonge
Irene Korstjens
Luc Budé
Toine Lagro-Janssen

Midwifery 2013; 29: e107-114



Abstract

Objective: To explore whether choices in birthing positions contributes to women's sense of control during birth.

Design: Survey using a self-report questionnaire. Multiple regression analyses were used to investigate which factors associated with choices in birthing positions affected women's sense of control.

Settings: Midwifery practices in the Netherlands

Participants: 1030 women with a physiological pregnancy and birth from 54 Dutch midwifery practices.

Findings: In the total group of women (n = 1030) significant predictors for sense of control were: influence on birthing positions (self or self together with others), attendance of antenatal classes, feelings towards birth in pregnancy and pain in second stage of labour. For women who preferred other than supine birthing positions (n = 204) significant predictors were: influence on birthing positions (self or self together with others), feelings towards birth in pregnancy, pain in second stage of labour and having a home birth. For these women, influence on birthing positions in combination with others had a greater effect on their sense of control than having an influence on their birthing positions just by themselves.

Key conclusions: Women felt more in control during birth if they experienced an influence on birthing positions. For women preferring other than supine positions, home birth and shared decision-making had added value.

Implications for practice: Midwives can play an important role in supporting women in their use of different birthing positions and help them find the positions they feel most comfortable in. Thus, contributing to women's positive experience of birth.

Introduction

Becoming a mother affects women in many ways, having a profound physical, emotional and social influence on their lives and self. Childbirth is a significant event in this transition to motherhood, leaving life-long, vivid memories in women [1]. While a healthy baby is a much desired outcome of birth, the experience of birth itself has an independent effect on women, even when the outcome is a healthy baby [2-4]. The way women experience their birth has short- and long-term implications for their own health and well-being, as well as for their families. A positive experience contributes to women's sense of accomplishment, self-esteem, feelings of competence and well-being [1,5,6]. It enhances maternal-child attachment and positive descriptions of their baby [5,6]. On the other hand, a negative childbirth experience can influence women's emotional well-being severely [3], including posttraumatic stress disorders or symptoms [2,7-9], and depressive moods [4,10]. This can have adverse effects on the relationship with their partner and the bond with their baby [11]. Negative experiences are also associated with avoidance of a subsequent pregnancy [12,13] and a wish for an elective caesarean section in future births [14,15].

The experience of childbirth is influenced by various factors. In quantitative studies investigating different factors simultaneously, a satisfying childbirth experience was mainly influenced by women's sense of control, labour pain, expectations, support and interventions during birth [5,9,16-20]. Several of these studies found that sense of control was the strongest predictor for satisfaction with childbirth [16,17]. Qualitative studies also identified sense of control as important for women's birth experience and well-being [1,11,21-25]. In addition, sense of control seemed to buffer the impact of pain on aspects of satisfaction with birth [19].

Sense of control is a multidimensional concept. In general, it is recognised as important to psychological functioning of humans. Decades of research in sociology and psychology have demonstrated that control is a robust predictor of physical and mental well-being. Experimental and correlation studies have shown that across the life span, from early infancy to old age, control is related to a variety of positive outcomes, including health [26]. Over the years various authors explored the meaning of control in the context of birth. They identified different internal and external dimensions [27,28]. Women's internal control included a sense of control over self, such as thoughts, emotions, behaviour and dealing with labour pain [27,28]. External control was described as involvement in the birth process [16], understanding what health-care providers are doing [29] or influence over procedures, decisions or information [28]. What seemed important to women is not so much the 'having' or 'being in control', but the affective component, the 'feeling' of having the possibility to influence [29]. In delineating that influence, decision-making is one component. Women wanted to participate in decisions regarding their care, but the degree of involvement varies [23]. Women's involvement also seemed to arise from feeling that they were informed and could challenge decisions if the need arises [27]. Or even from

feeling supported enough by people present at the birth 'to let go' rather than trying to assert control over events or over behaviour [30].

Some studies indicated that sense of control was also related to freedom of movement and choice in birthing positions [5,27,28]. In a qualitative study [31], women said that being encouraged to find the most suitable positions during labour contributed to their feelings of being in control, which resulted in positive birth experiences and emotional well-being afterwards. Still, studies on this topic are limited and have not explicitly focused on the effect choices in birthing positions have on women's sense of control, especially among women who prefer other than the more common supine positions. Women's choice can play a major role in birthing positions as there is no dominant medical reason for the routine use of a specific position [32,33].

This study aimed to explore the relationship between choices in birthing positions and sense of control during second stage of labour in a population of women with a physiological pregnancy and birth. This provided the opportunity to explore the more fundamental relationship between women's sense of control and birthing positions as women's positions were not influenced by medical complications or interventions during childbirth.

Methods

Settings and participants

A survey was conducted in primary care midwifery practices between October 2005 and December 2007. All Dutch midwifery practices (n=487) were invited by letter to participate in a study on the use of birthing positions in second stage of labour. A total of 54 practices agreed to participate which provided an appropriate number of participants. Therefore, no follow up reminders were sent to practices that did not respond. The practices were well distributed throughout the Netherlands, and covered urban and rural areas.

Women were eligible if they met two inclusion criteria: sufficient command of the Dutch language to fill out the questionnaire, and having received primary midwife-led care until the start of the second stage of labour. For this study, data were used from the women that had a physiological pregnancy and birth. These women did not have medical interventions such as epidural anaesthesia, augmentation or continuous foetal monitoring. The primary care midwife was the responsible professional throughout their birth.

Data collection

Shortly after birth, midwives gave eligible primiparous and multiparous women an information letter about the aim and content of the study and invited them to participate. Participation was strictly voluntary and participants remained anonymous, there was no way to link a given subject and her data. Participants gave their informed consent by filling

out the questionnaire at their homes without the care provider being present. They returned it in a sealed, unmarked envelope to the midwife who visited them in the postnatal period within one week after birth.

Within the same time span the midwives who attended the birth of these women completed a separate questionnaire.

Upon consultation, the Medical Ethics Committee of the region Arnhem-Nijmegen stated that ethical approval was not necessary because of the non-invasive character of the study.

Instruments

The questionnaire for the women included questions on *socio-demographic* and *childbirth factors* known from literature to be *related to choice of birthing positions*, such as age, education, place of birth, duration of second stage, antenatal information, women's preferences in birthing positions during pregnancy, influence of care provider [34,35]. Information was collected about women's sense of control, their experience of pain during birth, and women were asked for the feelings they had towards birth during their pregnancy. The pilot testing in 18 women led to small adjustments of the questionnaire.

The *Labour Agentry Scale* (LAS) was used to measure women's sense of control during second stage of labour. The LAS measures women's sense of mastery over internal and environmental forces during childbirth [36]. The LAS, originally with 29 items, is a self-reporting instrument with good reliability and validity and is used in numerous studies on sense of control in maternity care [17,36-38]. The shorter version of the LAS contains 10 items [36]. Women rank the items on a 7-point Likert-scale from (1) 'almost all of the time' to (7) 'never, or almost never'. The positive items are reversed for analysis and summated to a total score; higher scores indicate a higher sense of control. We used the LAS-10, as we did not want to burden women with long questionnaires in their first week after birth. Translation to Dutch resulted in 11-items, for the English item 'I felt helpless (powerless)' was translated into two separate items due to the difference in meaning of 'helpless' and 'powerless' in the Dutch language. The present study demonstrated a high internal consistency of this 11-item LAS with a Cronbach's alpha of 0.85.

Visual Analogue Scales (VAS-pain) were used to collect data on women's experience of pain - once recalling the pain in the last four hours of first stage of labour and once recalling pain during second stage - ranging from no pain (0) to worst pain possible (10). The measurement of pain by visual analogue scales is common practice in research, also for pain in childbirth [39] and has been found to be valid and reliable in estimating pain intensity [40].

Women's *feelings towards birth* were also measured with a Visual Analogue Scale. Women were asked 'How did you regard your birth beforehand? Probably, you had several emotions simultaneously. Try to remember how you felt in general'. The scores could range from very negative (0) to very positive (10).

Additional questions explored the birthing positions women actually used during the second stage of labour. Women could score more than one birthing position. Birthing positions were defined as: supine (recumbent or semi-recumbent positions), lateral, sitting (>45° from the horizontal), squatting, standing, use of birthing shell (a plastic plateau giving support to women in squatting position), use of birthing stool, hands and knees, and bath [32,33]. Short written information in everyday language explained the positions. In a matrix women could indicate which people were present at the birth and how much influence that had on the positions they adopted, ranging from a lot (1) to none (4) or I can't remember (5). Women were also asked whether they attended antenatal classes.

The separate questionnaire for the midwives consisted of questions about the socio-demographic, pregnancy and labour details of the women, including items on place of birth and birthing positions used. Both questionnaires are available in English from the first author.

Data analysis

For our analysis we used the questionnaires filled out by the women. Their responses were the primary data source. The questionnaires of the midwives were only used for verification of data, replacing missing data, and for information on place of birth and referral to the obstetrician.

Summary scores for the LAS were completed, after reversing the positive items. Scores for individual women were excluded if more than one item (>10%) was missing. If one question was not answered, the missing data were imputed by using the mean of the completed items of that respondent. Birthing positions were grouped together as supine positions and other positions [32,33]. Influence on use of birthing positions was dichotomised in 'influence' (scores 1-2) and 'no influence' (scores 3-5) and grouped as influence by 'self' (woman alone), 'together' (woman together with midwife and/or her partner) and 'others' (only midwife and/or partner).

Two multiple regression analyses were conducted with sense of control in second stage of childbirth (measured with the 11-item LAS) as the dependent variable, one for the whole group of participants and one for the group of women who had a preference for other than supine birthing positions during pregnancy. A priori, we created a model with predictors for sense of control to explore in the regression analyses (Figure 1) [41]. The model includes general factors that are related to sense of control, such as education, parity, information, feelings towards birth, place of birth, pain, influence on what is happening during birth [27,28,42,43]. Factors related to use and choice in birthing positions are age, education, place of birth, antenatal information, duration of second stage, preference in birthing position, influence of environment [34,35,44,45].

The independent factors in the model were operationalized using the following variables: women's characteristics (Table 1), 'actual birthing position in second stage of labour (other than supine/mixed/supine)', 'use of preferred birthing position (yes/no/no-

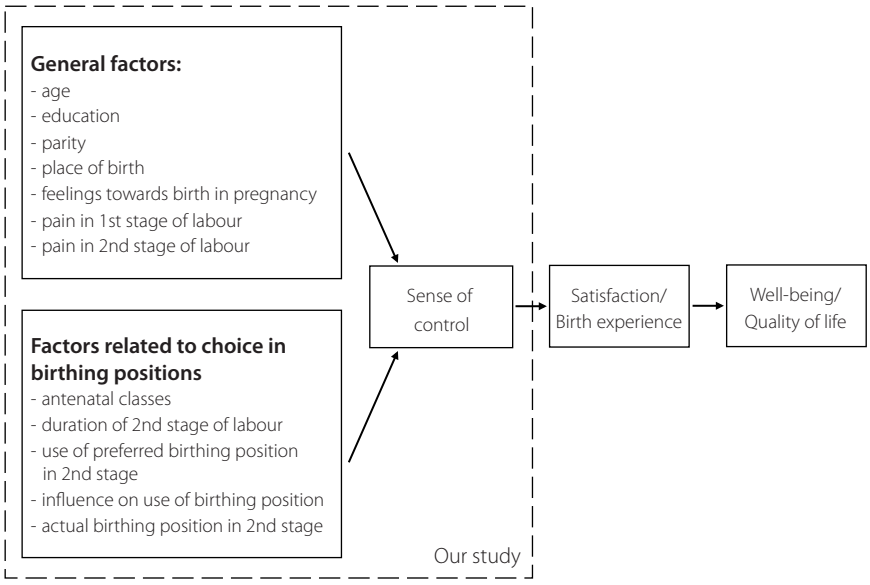


Figure 1 Model with predictors to explore sense of control.

preference)', 'influence on birthing position (self/self together with others/others)' and 'antenatal classes (yes/no)', 'feelings towards birth in pregnancy (1-10)', duration of second stage (in minutes), pain in first and second stage (1-10). We also included the interaction pain x parity, as other studies showed differences in the relationship between pain and sense of control for primiparous and multiparous women [27]. The full model is presented, indicating the significant and non-significant factors contributing to control.

Statistical analyses were conducted using SPSS Version 15.1 for Windows. Two-sided significance tests were applied ($\alpha < 0.05$).

Findings

Questionnaires of 1603 women were returned, for 1239 women both questionnaires were available (Figure 2). Of these women, 83 were excluded because they had been referred to obstetricians during second stage of labour and 126 were excluded because one or more variables were missing, leaving 1030 women for analysis. In this group, 204 women had a preference for other than supine birthing positions.

Table 1 Characteristics of the participants (n=1030).

	Participants No. (%)	PRN* (%)
Maternal age (yr)		
< 25	79 (7.7)	11.1
25-29	316 (30.7)	30.0
30-34	441 (42.8)	38.5
≥ 35	194 (18.8)	20.4
Education		
low	175 (17.0)	NA
medium	435 (42.2)	
high	420 (40.8)	
Parity		
primiparous	377 (36.6)	31.9
multiparous	653 (63.4)	68.1
Ethnic origin (n = 1022)		
Dutch	957 (93.6)	83.6
non-Dutch	65 (6.4)	16.4
Place of birth		
home	830 (80.6)	65.5
hospital supervised by midwife	200 (19.4)	33.6

NA = not available.
*PRN (n = 57620): Netherland Perinatal Registry. Bilthoven, 2007.

Characteristics of the participants

Table 1 shows the characteristics of the participants in this study. Compared to the Dutch national primary care population in midwife-led care at the onset of the second stage of labour [46], the study sample comprised fewer women aged <25 (8% versus 11%), more women between 30 and 35 years (43% versus 39%), more primiparous women (37% versus 32%), more women of Dutch origin (94% versus 84%), and more home births (81% versus 66%). No comparable data is available on level of education. In our study 17% of the women had a lower level of education.

Distribution of model factors in the two groups

In Table 2 descriptive statistics are given of the factors included in the regression models for the total study group and the group of women who preferred other than supine positions.

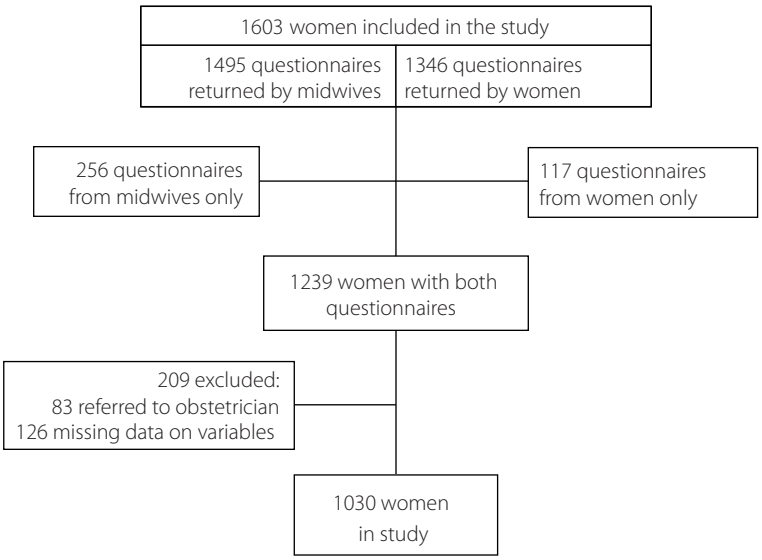


Figure 2 Flowchart of the study.

Multiple regressions

A multiple regression analysis (Table 3) was performed to explore whether the data of the whole group supported our theoretical model. Influence on birthing positions (self or together), attending antenatal classes, feelings towards birth in pregnancy and pain in second stage of labour were significantly associated with sense of control. Interaction between parity and pain in second stage of labour was also significant; implying that the negative effect of pain in second stage of labour on sense of personal control was less in multiparous women than in primiparous women.

Table 4 presents the findings of the multiple regression analysis of the group of women who preferred other than supine birthing positions. The factors that were significantly associated with sense of personal control were: influence on birthing positions (self or together), feelings towards birth in pregnancy, pain in second stage of labour and home birth. Having an influence on the birthing position together with others, such as their midwife or partner, was related to a higher sense of control than having an influence only by themselves ($t = 2.849, p = .005$ versus $t = 2.001, p = .047$).

The fulfilment of women's preference in birthing position and the use of a certain type of position were not significantly associated with sense of control.

Table 2 Distribution of the factors included in the multiple regression analyses.

Factors	All women (n=1030)		Women with other than supine preference (n=204; 19.8%)	
	N (%)	Mean (SD)	N (%)	Mean (SD)
LAS during second stage		56.24 (14.09)		56.26 (13.49)
Age		30.68 (4.20)		31.09 (4.03)
Education				
low	175 (17.0)		24 (11.8)	
medium	435 (42.2)		80 (39.2)	
high	420 (40.8)		100 (49.0)	
Primiparous women	377 (36.6)		88 (43.1)	
Home birth	830 (80.6)		175 (85.8)	
Actual birthing position in second stage of labour				
other than supine	122 (11.8)		82 (40.2)	
both supine and other than supine	302 (29.3)		73 (35.8)	
supine	606 (58.8)		49 (24.0)	
Use of preferred birthing position*				
when supine preference	584 (96.2)		-	
when other than supine preference	155 (76.0)		155 (76.0)	
Influence on birthing position				
self	209 (20.3)		48 (23.5)	
self together with others (midwife and/or partner)	701 (68.1)		129 (63.2)	
midwife and partner	260 (25.2)		43 (21.1)	
midwife	415 (40.3)		80 (39.2)	
partner	26 (2.5)		6 (2.9)	
others (midwife and/or partner)	120 (11.7)		27 (13.2)	
midwife and partner	85 (8.3)		6 (2.9)	
midwife	35 (3.4)		21 (10.3)	
partner	0		0	
Attended antenatal classes	521 (50.6)		120 (58.8)	
Feelings towards birth in pregnancy		6.67 (1.88)		6.74 (1.92)
Duration of second stage of labour		28.12 (27.20)		32.56 (30.18)
Pain during last four hours of first stage of labour		6.78 (2.05)		6.95 (2.01)
Pain during second stage of labour		6.87 (2.07)		7.17 (2.11)

*women could express more than one preference, 219 women had no preference or a preference for both supine and other than supine birthing positions

Table 3 Multiple regression model for the total group of women (n=1030).

Factors	B	95% confidence interval for B		t	p-value
		lower	upper		
(Constant)	54.431	45.747	63.115	12.300	.000
Age	.024	-.171	.220	.243	.808
Education					
middle versus low	-.585	-2.747	1.578	-.531	.596
high versus low	1.527	-.729	3.782	1.328	.184
Parity	-4.361	-11.170	2.447	-1.257	.209
Place of birth	.153	-1.744	2.050	.158	.874
Actual birthing position in second stage of labour					
mixed versus supine	-1.663	-3.497	.172	-1.779	.076
other than supine versus supine	.400	-2.035	2.835	.322	.747
Use of preferred birthing position					
not-used versus no preference	-2.126	-5.452	1.201	-1.254	.210
used versus no preference	-.497	-2.371	1.376	-.521	.603
Influence on birthing position					
together versus others	4.241	1.853	6.630	3.484	**.001**
self versus others	4.632	1.819	7.444	3.231	**.001**
Antenatal classes	1.879	0.212	3.546	2.212	**.027**
Feelings towards birth in pregnancy	2.209	1.799	2.618	10.584	**.000**
Duration of second stage of labour	-.013	-.050	.025	-.649	.516
Pain during first stage of labour	.229	-.376	.834	.742	.458
Pain during second stage of labour	-2.721	-3.277	-2.166	-9.616	**.000**
Interaction parity*pain first stage of labour	-.594	-1.356	.168	-1.529	.127
Interaction parity*pain second stage of labour	1,068	.360	1.775	2.962	**.003**

Dependent variable: sense of control (measured with LAS-11).

Table 4 Multiple regression model for the group of women who preferred other than supine birthing positions (n=204).

Factors	B	95% confidence interval for B		t	p-value
		lower	upper		
(Constant)	52.124	33.639	70.609	5.562	.000
Age	.082	-.344	.508	.381	.704
Education					
middle versus low	-2.835	-8.190	2.520	-1.044	.298
high versus low	-3.031	-8.418	2.356	-1.110	.268
Parity	-3.173	-17.717	11.371	-.430	.667
Place of birth	5.068	.470	9.666	2.174	**.031**
Use of preferred birthing position					
used versus not used	.506	-3.348	4.361	.259	.796
Influence on birthing position					
together versus others	6.772	2.084	11.461	2.849	**.005**
self versus others	5.561	.078	11.045	2.001	**.047**
Antenatal classes	1.648	-1.795	5.092	.944	.346
Feelings towards birth in pregnancy	2.061	1.199	2.922	4.720	**.000**
Duration of second stage of labour	-.054	-.120	.013	-1.596	.112
Pain during first stage of labour	.733	-.550	2.016	1.127	.261
Pain during second stage of labour	-3.070	-4.218	-1,921	-5.271	**.000**
Interaction parity*pain first stage of labour	-1.646	-3.298	0.005	-1.966	.051
Interaction parity*pain second stage of labour	1.410	-.089	2.909	1.856	.065

Dependent variable: sense of control (measured with LAS-11).

Discussion

Our study explored the relationship between choices in birthing positions and women's sense of control in second stage of labour. We found, in a group of women with a physiological pregnancy and birth, that having an influence on birthing positions (self or together with others), having attended antenatal classes, feelings towards birth in pregnancy and pain in second stage of labour were significant predictors for sense of control. In the group of women who indicated that they preferred other than supine

birthing positions, we found that having attended antenatal classes was no longer significant. For this group having a home birth was a significant predictor. The fulfilment of women's preference in position and the use of a certain type of position were not significantly associated with sense of control. Another interesting finding was that within this group having an influence on the birthing position together with others had a greater effect on sense of control than having an influence just by themselves. The other was nearly always the midwife. A finding advocating the need for support and shared decision-making.

It seems that in birthing positions, it is not so much a specific choice – the use of the preferred position – that has a positive impact on a woman's sense of control. Having an influence on birthing positions throughout birth seems more significant, which can be interpreted as being involved in what is happening. With this finding, our study adds to a further understanding of the concept of control in relation to childbirth [29,47]. In the discussion on the meaning of control in childbirth, some emphasise the consumer making the decisions as the central issue of control [48,49]. Others identify 'involvement in the birthing process' as a more important issue [16,29] being open to variation in who makes the final decision depending on individual needs and circumstances. The latter seems more applicable for birthing positions.

One explanation for this could be that giving birth is first of all a dynamic process, which makes it hard to predict what will happen and how a woman will react. Midwives have highlighted the importance of preparing women for the fact that birth is unpredictable [50]. This appears to be true for birthing positions as well: women might feel differently from how they anticipated. Moreover, circumstances may necessitate the use of other positions [51]. The possibility to change positions during labour might be more important than using one single chosen position [34]. In addition, being able to rely on the support of the care providers also contributes to women's experience of birth and is linked to feeling in control [21,22]. This seems to be confirmed by our finding that, especially for women who prefer less common choices, support from others, especially their midwife, in the use of birthing positions had a larger positive effect on their sense of control in birth than having an influence on the birthing positions only by themselves. In a previous qualitative study women already indicated that the midwife's advice was essential in their choice of birthing position [31]. They said they would feel less hesitation to use uncommon positions if the midwife supported them. Women liked to find the most suitable position through a shared process that combines their preferences and the midwife's suggestions.

Most women in maternity care seem to prefer some form of shared decision-making [52]. General literature on decision-making in health care also emphasises the need for combined contributions in the decision-making process [53], in which the information exchange is two-way interactive; the professional shares all relevant information, and the patient shares personal information, preferences and values. The deliberation is between client and

professional. Negotiations and support are both important to reach a consensus [54]. Shared decision-making in maternity care seeks bringing together professional expertise with women's values and preferences. Women's contribution may differ according to the type of decision or the conditions under which they are made; for example, when in pain or distress. During pregnancy and birth, shared decision-making is a dynamic process, which involves a dialogue that enables women to make and re-make choices and decisions [52]. Being well informed is part of this; both primiparous and multiparous women express a strong need for information already during pregnancy - on how to prepare for the use of birthing positions [44].

A minority of women preferred other positions than supine. Possibly women were unaware of the available options for birthing positions. In an earlier publication based on this dataset we reported that women predominately received information about birthing positions from antenatal classes, and that midwives seemed to have a minor role in this respect [45]. However, in a qualitative study, women indicated that the midwife's advice was the most important factor that influenced their choice of birthing position [31].

Giving birth at home seems to contribute to women's sense of control when preferring less common positions. This is in line with other studies showing that women choose a home birth because they feel that they will be more in control. They expressed that in their home they were more able to influence what will happen, not only in birthing positions but also in general [42,43].

Women's partners appear to have a minor role in the choice of birthing position. The influence of the partner in our study was limited. In another Dutch study, women also mentioned that their partners had a minor role in the choice of birthing position [31].

Pain also affected women's sense of control. As in the study of [27], this effect seemed stronger in primiparous women than in multiparous women. Still, the meaning of pain for the birth experience is not yet fully understood. Although, studies showed that high levels of labour pain related negatively to sense of control [27] and influenced the experience of birth [18-20], others found that high levels of pain does not necessarily bring about dissatisfied mothers [17]. Sense of control seems to mediate the negative impact of pain on birth experiences [19]. Control over pain relief seems to contribute to women's experience of birth [55]. Beside pain medication, this also includes women's own coping resources. The negative influence that pain had on women's experience of birth was not different in women with or without an epidural [56]. In a systematic review Hodnett [39] concluded that pain and pain relief did not play a major role in childbirth satisfaction, unless expectations regarding either are unmet.

A limitation of the study was that the participating midwifery practices were self-selected. Most likely, positive attitudes towards diversity in birthing positions played a part in midwives' willingness to participate in a study on birthing positions. They might have been more open to give women influence over their birthing position, thereby contributing positively to women's sense of control. Furthermore, the questions about

women's feelings towards birth and preferences in pregnancy were filled out by women after they gave birth and this may have led to avoidance of post decision dissonance [57]. Women may have responded in line with the final outcome, influencing their sense of control. Still, another study also found that, women's feelings towards birth before the event had an effect on their sense of control and experience of birth [5].

Strength of this study was that it focused on women with a physiological pregnancy and birth. This way, we could explore the more fundamental relationship between women's sense of control and birthing positions, as the positions were not influenced by medical interventions and circumstances. Although, our findings cannot be automatically generalised to women experiencing complications, we note that even when there are complications, a physiological approach to birth may still be possible to some extent. Having an influence on birthing positions may add to these women's sense of involvement in their care and a subsequent positive birth experience.

The results of this study indicate that having an influence on birthing positions in labour contributed to women's sense of control. For women preferring other than supine positions, home birth and shared decision-making had added value. This raises the question how care providers and women can optimally work together to give women influence over birthing positions. More research is needed on what happens in the dynamic of practice with regard to birthing positions. Observation can provide more insight in the interaction process between care providers, women and their partners. How are women enabled to use their influence and how can this be improved?

Midwives have an important role in proactively offering women information and support to help them use different birthing positions and find the positions they feel most comfortable in. This contributes to women's positive experience of birth.

Acknowledgements

We thank the participating midwives, student-midwives and pregnant women in the 54 Dutch midwifery practices who made this study possible.

References

1. Simkin P. Just another day in a woman's life? Women's long-term perceptions of their first birth experience. Birth 1991;18:203-10.
2. Czarnocka J, Slade P. Prevalence and predictors of post-traumatic stress symptoms following childbirth. British Journal of Clinical Psychology 2000;39:35-51.
3. Skari H, Skreden M, Malt UF, et al. Comparative levels of psychological distress, stress symptoms, depression and anxiety after childbirth - a prospective population-based study of mothers and fathers. BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:1154-63.
4. Zaers S, Waschke M, Ehlert U. Depressive symptoms and symptoms of post-traumatic stress disorder in women after childbirth. Journal of Psychosomatic Obstetrics & Gynecology 2008;29:61-71.
5. Green JM, Coupland VA, Kitzinger JV. Expectations, experiences, and psychological outcomes of childbirth: a prospective study of 825 women. Birth 1990;17:15-24.
6. Mercer RT, Ferketich SL. Maternal-infant attachment of experienced and inexperienced mothers during infancy. Nursing Research 1994;42:344-51.
7. Creedy DK, Shochet IM, Horsfall J. Childbirth and the development of acute trauma symptoms: incidence and contributing factors. Birth 2000;27:104-11.
8. Ayers S, Pickering AD. Do women get posttraumatic stress disorder as a result of childbirth? A prospective study of incidence. Birth 2001;28:111-8.
9. Soet JE, Brack GA, Dilorio C. Prevalence and predictors of women's experience of psychological trauma during childbirth. Birth 2003;30:36-46.
10. Righetti-Veltema M, Conne-Perréard E, Bousquet A, Manzano J. Risk factors and predictive signs of postpartum depression. Journal of Affective Disorders 1998;49:167-80.
11. Elmir R, Schmied V, Wilkes L, Jackson D. Women's perceptions and experiences of a traumatic birth: a meta-ethnography. Journal of Advanced Nursing 2010;66:2142-53.
12. Gottvall K, Waldenström U. Does a traumatic birth experience have an impact on future reproduction? BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:254-60.
13. Porter M, Bhattacharya S, van Teijlingen E. Unfulfilled expectations: how circumstances impinge on women's reproductive choices. Social Science & Medicine 2006;62:1757-67.
14. Hildingsson I, Rådestad I, Rubertsson C, Waldenström U. Few women wish to be delivered by caesarean section. BJOG: An International Journal of Obstetrics & Gynaecology 2002;109:618-23.
15. Tschudin S, Alder J, Hendriksen S, et al. Previous birth experience and birth anxiety: predictors of caesarean section on demand? Journal of Psychosomatic Obstetrics & Gynecology 2009;30:175-80.
16. Waldenström U. Experience of labor and birth in 1111 women. Journal of Psychosomatic Research 1999;47:471-82.
17. Goodman P, Mackey MC, Tavakoli AS. Factors related to childbirth satisfaction. Journal of Advanced Nursing 2004;46:212-9.
18. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
19. Christiaens W, Bracke P. Assessment of social psychological determinants of satisfaction with childbirth in a cross-national perspective. BMC Pregnancy and Childbirth 2007;7:26.
20. Rijnders M, Baston H, Schönbeck Y, et al. Perinatal factors related to negative or positive recall of birth experience in women 3 years postpartum in the Netherlands. Birth 2008;35:107-16.
21. Walker JM, Hall S, Thomas M. The experience labour: a perspective from those receiving care in a midwife-led unit. Midwifery 1995;11:120-9.
22. Halldorsdottir S, Karlsdottir SI. Journeying through labour and delivery: perceptions of women who have given birth. Midwifery 1996;12:48-61.
23. Lavender T, Walkinshaw SA, Walton I. A prospective study of women's views of factors contributing to a positive birth experience. Midwifery 1999;15:40-6.
24. Gibbins J, Thomson AM. Women's expectations and experiences of childbirth. Midwifery 2001;17:302-13.
25. Dahlen H, Barclay L, Homer CSE. The novice birthing: theorising first-time mothers' experiences of birth at home and in hospital in Australia. Midwifery 2008;26:53-63.
26. Skinner EA. A guide to constructs of control. Journal of Personality and Social Psychology 1996;71:549-70.

27. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.
28. Ford E, Ayers S, Wright DB. Measurement of maternal perceptions of support and control in birth (SCIB). Journal of Women's Health 2009;18:245-52.
29. Green JM. Commentary: what is this thing called "control"? Birth 1999;26:51-2.
30. Parratt J, Fahy K. Trusting enough, to be out of control: a pilot study of women's sense of self during childbirth. Australian Journal of Midwifery 2003;16:15-22.
31. De Jonge A, Lagro-Janssen ALM. Birthing positions. A qualitative study into the views of women about various birthing positions. Journal of Psychosomatic Obstetrics & Gynecology 2004;25:47-55.
32. De Jonge A, Teunissen TAM, Lagro-Janssen ALM. Supine position compared to other positions during the second stage of labor: a meta-analytic review. Journal of Psychosomatic Obstetrics & Gynecology 2004;25:35-45.
33. Gupta JK, Hofmeyr GJ, Smyth RMD. Position in the second of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews 2004, Issue 1. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub2
34. Roberts JE. The "push" for evidence: management of the second stage. Journal of Midwifery and Women's Health 2002;47:2-15.
35. De Jonge A, Rijnders MEB, van Diem MTh, Scheepers PLH, Lagro-Janssen, ALM. Are there inequalities in choice of birthing position? Sociodemographic and labour factors associated with the supine position during the second stage of labour. Midwifery 2007;25:439-48.
36. Hodnett E. Labour Agentry Scale: a measure of a woman's sense of control over the childbirth experience. In: Redman BK, editor. Measurement tools in patient education. New York: Springer Publishing Company; 2003.
37. Hodnett E, Simmons-Tropea D. The Labour Agentry Scale: psychometric properties of an instrument measuring control during childbirth. Research in Nursing and Health 1987;10:301-10.
38. Janssen PA, Carty EA, Reime B. Satisfaction with planned place of birth among midwifery clients in British Columbia. Journal of Midwifery and Women's Health 2006;51:91-7.
39. Hodnett ED. Pain and women's satisfaction with the experience of childbirth: a systematic review. American Journal of Obstetrics and Gynecology 2002;186:S160-72.
40. Noble B, Clark D, Meldrum M, et al. The measurement of pain, 1945–2000. Journal of Pain and Symptom Management 2005;29:14-21.
41. Field A. Discovering statistics using SPSS. London: SAGE Publications Ltd.; 2009.
42. Borquez H, Wiegers T. A comparison of labour and birth experiences of women delivering in a birthing centre and at home in the Netherlands. Midwifery 2006;22:339-47.
43. Janssen, P., Henderson, A., & Vedam, S., 2009. The experience of planned home birth: views of the first 500 women. Birth 2009;36:297-304.
44. Seefat-van Teeffelen A, Nieuwenhuijze M, Korstjens I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-7.
45. Nieuwenhuijze M, de Jonge A, Korstjens I, Lagro-Janssen A. Factors influencing the fulfillment of women's preferences for birthing positions during second stage of labour. Journal of Psychosomatic Obstetrics & Gynecology 2012;33:25-31.
46. PRN. Data of the Netherlands Perinatal Registry (PRN-foundation). Bilthoven, 2007.
47. Walsh D. A birth centre's encounters with discourses of childbirth: how resistance led to innovation. Sociology of Health & Illness 2007;2:216-32.
48. Weaver J. Choice, control and decision-making in labour. In: Clement S, editor. Psychological perspectives on pregnancy and childbirth. Edinburgh: Elsevier; 1998.
49. VandeVusse L. Decision making in analyses of women's birth stories. Birth 1999;26:43-50.
50. Kitzinger S. The politics of birth. Edinburgh: Elsevier Health, 2005. Chapter 11, Birth plans; p. 89-97.
51. De Jonge A, Teunissen DAM, van Diem MTh, Scheepers PLH, Lagro-Janssen ALM. Women's positions during the second stage of labour: views of primary care midwives. Journal of Advanced Nursing 2008;63:347-56.
52. O'Cathain A, Thomas K, Walters SJ, Nicholl J, Kirkham M. Women's perceptions of informed choice in maternity care. Midwifery 2002;18:136-44.
53. Elwyn G, Edwards A, Kinnersley P. Shared decision-making in primary care: the neglected second half of the consultation. British Journal of General Practice 1999;49:477-82.

54. Edwards NP. Why can't women just say no? And does it really matter? In: Kirkham M, editor. Informed choice in maternity care. Basingstoke: Palgrave Macmillan; 2004.
55. McCrea BH, Wright ME. Satisfaction in childbirth and perceptions of personal control in pain relief during labour. Journal of Advanced Nursing 1999;29:877-84.
56. Waldenström U, Irestedt L. Obstetric pain relief and its association with remembrance of labor pain at two months and one year after birth. Journal of Psychosomatic Obstetrics & Gynecology 2006;27:147-56.ildbirth
57. Festinger L. A Theory of cognitive dissonance. Stanford: Stanford University Press; 1957.

5

The role of maternity care providers in promoting shared decision-making regarding birthing positions during second stage of labor

Marianne J. Nieuwenhuijze
Lisa Kane Low
Irene Korstjens
Toine Lagro-Janssen

Journal of Midwifery and Women's Health, in press

Abstract

Introduction: Through the use of a variety of birthing positions during second stage labor, a woman can increase progress, promote optimal health outcomes, and is more likely to have a positive birth experience. The role maternity care providers play in determining which position a woman uses during second stage has not been thoroughly explored. The purpose of this qualitative investigation was to explore how maternity care providers communicate with women during second stage labor as they decided on birthing positions.

Methods: A literature informed framework was developed to conduct a process of deductive content analysis of communication patterns between nulliparous women and their maternity care providers during second stage labor. Literature regarding shared decision-making, control, and predictors of positive birth experiences were reviewed to develop a coding framework for the analysis process. The framework included the following categories: *listening to women, encouragement, information, offering choices* and *style of support*. Forty-one audiotapes of women and their maternity care providers during second stage of labor were transcribed verbatim and analyzed.

Results: Themes identified in the transcripts included all those in the analytic framework plus two added categories of communication: *empathy* and *interaction*. Maternity care providers in this study enabled women to select various birthing positions using a dynamic process that moved between open, informative approaches and more closed, directive approaches depending on the woman's needs and clinical condition. Women became more actively involved in shared decision-making regarding birthing positions as providers found the right balance between being responsive to the woman's questions or directive as clinical conditions unfolded.

Discussion: Enabling shared decision-making during birth is not a linear process using a single approach; it is dynamic process that requires a variety of approaches.

Conclusion: Care providers can support a woman to use different birthing positions during second stage labor by employing a flexible style that incorporates clinical assessments and the woman's responses.

Introduction

In second stage of labor, how women and their maternity care providers approach decisions regarding birthing positions is import, since these decisions can influence clinical outcomes. Women's involvement in decision-making has been shown to have a profound effect on their birth experiences and satisfaction with care [1,2,3]. Yet research on the involvement of women in decision-making in maternity care, including selection of position for birth has primarily been framed as control during the birth experience and the process of shared decision-making has not been widely studied. Using women's birth stories, VandeVusse explored how sharing control contributed to the decision-making process and women's positive emotions regarding the birth experience [4]. Her conceptualization of control was focused on women's active involvement in decision-making. However, others have emphasized that the degree at which women want to participate in decision-making regarding their care, might vary [5,6]. Women's involvement also seems to arise from feeling that they could challenge decisions made by others if the need arises instead of making decisions themselves [7]. Women who felt supported enough by people present at the birth 'to let go' is another aspect of women's positive evaluation of their birth experience rather than trying to assert control over events or over behaviour also reported positive birth experiences[8].

Researchers highlighted the complexity of women's involvement in decision-making during childbirth in a survey of 1573 American women who had given birth in the hospital at least once [9]. Most women (73%) said they should make decisions after consulting their care providers, while 23% indicated that shared mother-caregiver decision-making was a means to come to the final decision about an option or choice [9]. How shared decision-making during birth is or is not enacted regarding selection of birthing positions during second stage labor is an area that has yet to be explored.

Overall, scientific evidence regarding the optimal position for birth does not indicate that one position is better than another. In a meta-analysis of 22 trials (7280 women), researchers documented the benefits of upright birthing positions in comparison to the supine position in women without epidural analgesia, including fewer assisted deliveries, episiotomies, and abnormal fetal heart rate patterns [10]. Outcomes were similar for need for blood transfusion or admission of infants to neonatal intensive care units. Increased estimated blood loss and higher rates of postpartum hemorrhage were found with the use of non-supine positions, however, in a cohort study, blood loss and postpartum hemorrhage were only significantly increased among women with perineal trauma using upright positions [11]. In a similar meta-analysis for women with epidural (5 trials, 879 women), the authors found no differences between upright positions and horizontal positions [12].

Other researchers have indicated that the ability to change positions and a woman's ability to determine which positions are used affect their satisfaction with the birth experience and sense of control [13-15]. When providers are attentive to the dynamic process

of birth and open to changing positions during labor this approach might be more beneficial than only using one position [16]. This seems especially significant in longer second stages of labor or for women who received epidural analgesia when a change of positions may contribute to the comfort of the woman, the alignment of the fetus with the pelvis, and progress towards birth [17]. In observational studies of women giving birth in non-prescriptive environments where they were encouraged and supported to choose their own positions, women tended to use a variety of positions during second stage of labor as opposed to a single position [18-20].

In summary, in the absence of direct evidence that one position for birth is optimal, women's personal preferences can be used to determine which position to use for birth. Yet not all women have equal access to the use of different birthing positions or to involvement in decisions about the position to use [21,22]. Aspects of shared decision-making regarding birthing position include how much maternity care providers support and enable women to explore preferences in birthing positions and identifying comfortable and effective positions to support progress [16,20,23-25]. In prior studies, researchers suggested that women value the support that care providers can offer, but they also want to have an influence on the decisions regarding birthing positions in conjunction with care providers [15].

Insight into the interaction between women and maternity care providers regarding birthing positions during second stage labor can contribute to a better understanding of how to involve women in shared decision-making regarding other aspects of care during birth. The aim of this qualitative study was to explore the communication between maternity care providers and women during second stage labor as choices and decisions regarding birthing position are made.

Methods

Design, setting and data collection

An exploratory qualitative investigation was conducted using audio recording of women during second stage labor that were part of a larger randomized clinical trial, the Promoting Effective Recovery from Labor (PERL) project. This project focused on prevention of incontinence associated with childbirth. Following institutional review board approval women older than the age of 18 and planning a first vaginal birth were enrolled in the parent project between 2000 and 2006 from a USA teaching hospital. The study methods for the larger project are reported in detail elsewhere [26]. As an additional component of the parent project, a subset of the participants agreed to allow audio recording of the conversations occurring during second stage labor. The audio recording were intended to serve as a validation of the pushing method used by women during second stage labor. The audio recording was made using a regular cassette started by the nurse once the woman entered second stage labor through the birth of the newborn.

From the available 110 tapes, 50 were randomly selected and transcribed verbatim, including all aspects of communication. Of the transcribed tapes, 9 were subsequently excluded: 2 because of multiparous births, 5 because only a small fragment of second stage was recorded, 2 because the quality of the recording was very poor. This left 41 tapes for analysis. The duration of the tapes ranged from just a few minutes to 5½ hours (340 minutes). In 8 of the tapes there was no mention of the birthing positions used during second stage labor, all of which were of short duration. The tapes were transcribed verbatim by 2 individuals who had prior experience in transcribing individual and focus group data. A random selection of 10 tapes was listened to by two of the authors (MN and LKL) to confirm the accuracy of the transcription process and to allow the investigators to appreciate pauses, delays in communication and/or periods of quite when sounds may be heard such as breathing, bearing down sounds, etc.

Analysis

The focus of the analysis was on the communication between women and care providers regarding birthing positions during second stage labor through birth. Partners and others present at birth were recognized as participants in this interaction but were not included in the scope of this study. The type of provider at the birth, midwife (CNM), physician (MD) or nurse (RN), was determined by how they were referred to on the tape as indicated in the transcript.

Data were analyzed using deductive content analysis, which is used when existing information on a topic or area exists, and the new analysis will add or extend that knowledge or result in theory development [27]. This process of analysis has also been described as extended case methodology, the goal of which is to increase knowledge rather than create an initial understanding of a phenomenon [28]. Existing literature is available regarding shared decision-making in other health care contexts and attributes women identify as contributing to a positive maternity care or birth experience. We developed a framework prior to the initiation of analysis based on studies about patients' active involvement in choices and shared decision-making in general health care [29-31]. Behavioral elements from studies on sense of control and decision-making during birth that contribute to positive birth experiences were also incorporated into the framework [32-34]. Women's sense of control during birth has been shown to be an important factor contributing to positive assessment of the birth experience and subsequent well-being [1,2,3,13,35]. Sense of control has been described as involvement in the birth process, influence over procedures, decisions or information, being offered choices, and participation in decision-making [1,33,34]. We included communication patterns previously described during second stage labor related to the types of pushing women may use and the provider role in encouraging that pushing approach [36,37].

The analytic framework generated from the literature included the categories *listening to women, encouragement, information, offering choices*, and *style of support* (Table 1).

Table 1 Framework for analyzing care provider's communication in enabling women's involvement in decision-making on birthing positions.

Category/Concept	The care provider
Communication	
Listening to women	is sensitive and responsive to verbal and non-verbal signs of the woman, ask for feedback from the woman on how she feels.
Encouragement	encourages the woman to bring forward wishes and needs for positioning and reassures/affirms/stimulates the woman in her choices and use of positions.
Choices	offers different options and choices, supports the woman in fulfilling her choices.
Information	gives tailored information on change of birthing positions and on the different positions, gives advice.
Provider style	
Directive	takes an authoritative approach, telling/instructing the woman what to do and how to do it, there is no give and take or conversation but one way communication.
Supportive directive	listens to the woman and responds to her questions, desires for direction but then returns to a supportive role when the question is answer or the need for some direction is met.
Supportive	assumes a role of encouragement, acknowledging the woman, what she is doing but does not offer specific direction.

The transcripts were considered the primary data sources, and we analyzed them using this framework with a deductive process [27]. The first author read and reread the complete transcripts of each tape to identify any communication or interaction related to birthing positions. The central categories from the framework and key statements of the interaction on birthing positions were identified in each transcript. Beyond the central categories in the framework, the analysis process was open to identify any missing or new themes that would present themselves during the review of the transcripts, which were not included in the original literature based framework.

We also explored the development of the interaction between the woman and providers in relation to the dynamics of the birthing process. Using the definitions of provider styles from the analytic framework listed in Table 1, we listened to a number of tapes to determine whether our interpretation of the care provider's style of interaction from the transcript was supported by the tone of voice used in the communication. In a number of cases (7), care providers seemed especially attentive to supporting women in their choices for birthing positions. These tapes were analyzed further to explore the interaction and style of support providers offered. The second author conducted a

dependability and confirmability audit, to check the analysis against accepted standards and examining the analysis process and records for accuracy [38]. The qualitative findings are presented as descriptive summaries and interpretations of the key categories identified and are supported and illustrated by quotes from the raw data. After each quote, the ID number of the participant is given. NVivo 8 (QSR International) was used for the qualitative analyses process, while socio-demographic data were analyzed with descriptive statistics using Statistical Package for the Social Sciences, version 19 (SPSS Inc.).

Results

The final sample of 41 included participants; all were nulliparous and experienced an uncomplicated term pregnancies. Demographic characteristics of the women are provided in Table 2.

Table 2 Characteristics of the participants*.

	Participants No. (%)
Maternal age (mean) (n = 39)	28.5
Education (n = 39)	
up to some years of college	11 (28.2)
finished college	11 (28.2)
finished graduate school	17 (43.6)
Ethnic origin (n = 39)	
black	1 (2.6)
Asian	1 (2.6)
white, non-Hispanic	36 (87.8)
other	1 (2.6)
Epidural (n=40)	
yes	27 (67.5)
no	13 (32.5)
Mode of delivery (n=40)	
vaginal	35 (87.5)
cesarean	5 (12.5)
Responsible care provider at birth (n=39)	
nurse-midwife	12 (30.8)
physician (obstetrician/gynecologist, family physician)	27 (69.2)

*Due to some missing data, the number of actual participants for a specific demographic item is listed.

Birthing positions

In a total of 33 tapes, birthing positions were mentioned at least once during second stage labor. The median for mentioning birthing positions was 9 times, ranging from 1 to 28 times. Change of birthing positions was mentioned more often when second stage lasted longer and when midwives were the responsible care providers. Midwives were also noted to offer a greater variety of birthing positions.

The birthing positions most often offered to women by their care providers were squatting and hands-and-knees positions. Sitting, semi-recumbent and side positions were also offered but less often. Standing positions and the use of the shower or bath were offered occasionally. The positions that were used most often were semi-recumbent, sitting, squatting and side positions. A few times the hands and knees positions of the shower or bath were used. Nearly all women changed to different positions several times during birth.

The most common reasons mentioned for change in position were comfort of the mother and to promote progress of labor. Fetal distress was only occasionally a reason for position change. Several times positions were changed to meet the woman's request. When women asked for a specific birthing position, it was primarily a vertical position, such as squatting or sitting. On a few occasions women asked to use a side position. Women never asked for a (semi-)recumbent position.

Provider involvement in decisions regarding birthing positions

From our analysis the role of care providers was significant in enabling women to consider choices regarding the use of various birthing positions and thus share in decision making. The following themes were evident in the data.

Listening to women

Care providers' responsiveness to signals given by the women enables active involvement of women in their care. Care providers in this study were responsive to women's requests about certain birthing positions:

> Woman: I want to try the bar.
> Provider (CNM): What do you think? Support you this way and grab on to it? Okay, here's the bar (woman's name). Want me to put the head of the bed up so you're sitting up a little higher and then you can grab the bar? Okay? If you want I can lower the bar too.
> Woman: Okay, let's do that. (#240)

However, in most cases the care provider assessed the woman's behavior and then recommended position changes instead of waiting for the woman initiate the change. In doing so, providers were trying to make women more comfortable. Occasionally, they

asked how women felt in certain positions and explored how to further adjust positions for women's comfort: "Provider (CNM): If that's comfortable for you, if that helps. You can try it [squat bar] and if you don't like it we can take it right off." (#290)

Sometimes providers mentioned changes of position because they had the impression women were uncomfortable at that moment: "Provider (CNM): Is this position okay for you or did you want to use the pushing bar or anything like that?" (#240) They often combined their response with empathic assurance and encouragement, emphasizing their primary task is to make everything as comfortable as possible for the woman.

Encouragement

Most of the verbal feedback given by care providers was aimed at encouraging women to go on pushing:

Provider (RN): I don't think standing is making it any worse. I think T told me that you like being up and about and that's what you should do. You should just do what's worked before in the past. Kind of change positions and just deal with each contraction as it comes and just do the best you can and get through it. (#173)

Information

Most of the information given on birthing positions was directed on how to use a certain position:

> Provider (CNM): We'll put the back of the bed up and your feet down and you can, there are all kinds of ways to do it, but so you can kind of sit on the edge of where the bed splits here and sort of grab on to the bar. Like with a contraction, if you're able to kind of grab on to the bar and squat.
> Woman: Okay, so I should get up.
> Provider (CNM): Well, we'll put your bed up. We'll put your head up. Okay and we can adjust that if you need it lower. (#278)

Also the care provider gave information about why she wanted the woman to use a certain position at that moment, often explaining the mechanism of labor and the potential relationship it should have in improving the woman's ability to bear down. Occasionally, information was given on restrictions against the use of certain positions, e.g. with epidural analgesia.

Choices

Care providers used different approaches to offer changes in birthing positions and choices of positions to the women. The approaches moved from a very general, open

approach to offering one specific position. Overall, most care providers expressed openness to using different positions and tended to use open, supportive approaches to introduce the topic of birthing positions in the beginning of second stage. They either asked an open-ended question about what birthing positions women would like to use, or they stated that women could use any position they felt comfortable with. This presented the possibility of a change of position as a natural part of second stage labor management and in some cases emphasized the importance of change: "Provider (CNM): There's not one way or one position that works for everybody. That's why you change around." (#278) If care providers felt that women were uncomfortable or that the birth wasn't progressing optimally, they would become more directive and suggest only a limited number of options or direct the women towards one specific position.

Women participating in choices on birthing positions

A limited number of women actively communicated the desire to use a certain position and a few were persistent in expressing their preferences, "Yeah, I think I should at least try it. I do a lot of squats at home." (#278) Other women had a more hesitant approach and asked for direction, "Does this still seem like the best position? Am I being useful in this position? Somebody's gonna tell me if…" (#252) Most women were willing to try the positions that were offered to them and told providers whether the position was comfortable and worked or not.

Interaction between care providers and women

Maternity care providers used different styles to interact with women regarding birthing positions. We noted differences in styles between care providers and within the same provider. Often, two or all three styles (directive, supportive direction, and supportive) were used by the same provider. This depended on the provider's assessment of the clinical situation and the woman's needs. In their interactions with women, many care providers showed empathy and were concerned for the women's physical and mental well-being. They acknowledged women's emotions and the hard work they were performing. This seemed to add to a sphere of openness that allowed women to voice their wishes:

> Provider (CNM): Good job! Did it feel okay to have your feet up on that squat bar?
> Woman: Yeah, I mean both ways were fine. But it does feel like I have more leverage.
> Provider (CNM): Yup, more leverage and more control, yeah. It's tiring isn't it?
> Woman: Just when you feel like you're going to pass out. Ha-ha. (#290)

Or in another example:

> Provider (CNM): You tell us when you're tired of this position okay? I know this is a hard one…
> Woman: Yeah, I think I've got a couple more and that's it.
> Provider (CNM): We also can push on your side, you can squat, you can do whatever you want. (#286)

Some care providers provided extensive direction (directive style) and told women what to do and how to do it. This style was more prevalent when women were panicking, in pain, or the condition of the fetus made adjustment necessary. Sometimes the woman explicitly asked the care provider to tell her what to do. However, when a directive style was initiated by the provider, it seemed to be the dominant approach used by that provider in general, and there was almost no verbal interaction with the woman related to birthing positions. Instead, the provider focused on giving directions on what to do and how to do it. This style was usually used in combination with direction to use a (semi-) recumbent position.

However, the majority of care providers started by openly exploring which positions women wanted to use (supportive style) by posing an open ended question and enabled women to use whatever positions they preferred. If the woman knew what she wanted, a dialogue evolved on how to establish that birthing position: the care provider gave different suggestions on how best to do it and the woman would comment on how it felt. If the woman was uncertain or couldn't find the right position, the care provider would move to a more directive approach (supportive direction) in an ongoing interaction. The care provider gave specific suggestions for certain positions and offered the woman detailed direction on how to actually use the position, including a process of confirming that the directions offered by the provider were understood or helpful:

> Woman: I'm having a hard time keeping myself up.
> Provider (RN): Would you like some support? We can put this in back and have your momma sit on here.
> Grandparent: Do what now?
> Provider (RN): She wants to sit forward. Put your arms under her. Do you feel like you want to change positions?
> Woman: I don't know what position I'd change to.
> Provider (RN): You can try something different if you want. You can lean back and put your feet up on the bar. (#173)

A few women seemed more prepared for the use of certain positions, and in instances where women had specific ideas about the use of certain birthing positions, the care

provider was triggered by these requests to become more active in their interactions. Once the care provider started working with the woman, the woman also actively worked with the care provider. For instance, when progress was slow, the woman would suggest a different position and the interaction became more shared between the provider and the woman to reach the best position to promote progress:

> Woman: Let's try ... turning over seems like so much work. On hands and knees again seems like that would really help her get out.
> Provider (CNM): It'll help but if you're too tired I'd go for the squat.
> Woman: Let's try the squat then. (#286)

A number of care providers were very responsive to switching their approach based on verbal and non-verbal signals given (when they could be inferred) by the women. This interaction was characterized by the use of empathy. Apart from women's verbal comments, it sounded as if the provider often assessed the woman's behavior and then interjected a recommendation for position changes instead of the woman actually requesting or saying anything specific about the need for a change:

> Provider (RN): We can get a birthing bar that you can hang from, you can stand and push, you can do just any way you want.
> Woman: This is most comfortable.
> Provider (RN): If laying here is comfortable I wouldn't move. Do you want me to put you on your side for a bit?
> Woman: Yeah.
> Provider (RN): Whatever works. You're doing a great job. (#223)

Later during second stage the same woman and provider had the following exchange:

> Woman: Crying
> Provider (RN): It's alright. Sometimes it helps if you want to put your leg up here. It kind of gives you a little bit of a leverage you know, where, what to do. It helps save your energy a little bit more too. Want to try that? (#223)

Empathy is indicated by the ongoing assessment whereby the provider made multiple intuitive and experientially driven assessments about how the woman was progressing in a specific position. This dialectic process combines the preferences of the woman with the ongoing assessment of the provider. The care provider then uses her expertise to adjust her approach to match the unique features of the clinical situation in concert with the woman's desires. This was present with both midwives and nurses at the bedside:

Provider (CNM): You tell us when you're tired of this position okay? I know this is a hard one to stay in.
Woman: Yeah, I think I've got a couple more and that's it.
Provider (CNM): We also can push on your side, you can squat, you can do whatever you want.
Woman: Yeah, we can try squatting again.
Provider (CNM): That also takes a lot of energy so if you want to try an easy one in between. (#286)

Discussion

In our analysis of the transcripts, we identified all the categories from the framework: *listening to women, encouragement, information, offering choices*, and *style of support* (Table 1). In transcripts in which bedside care providers seemed especially sensitive and open to shared decision-making and change in the use of birthing positions, all the behavioral elements of the framework appeared in some form or another. However, two additional categories were identified during analysis: *empathy* and *interaction*.

Empathy was representative of a broad dimension in the interaction between care providers and women that was crucial for enabling women's involvement in decision-making [39-41]. *Interaction* was representative of the movement between preferences, needs, and knowledge of the provider and the woman. This process was a core element in reaching comfortable birthing positions and optimal progress to accomplishing birth. The revised framework is provided in Table 3. This framework can be used in future investigations of provider communication during the multidimensional process of labor and birth to evaluate the process of shared decision-making.

Clinical implications

Our findings demonstrate that maternity care provider communication with women that enables women's involvement in shared decisions regarding the use of birthing positions is a dynamic process. Care providers in this investigation moved between an open, informative approach to a more closed, directive approach depending on the needs of the woman and clinical assessments. These needs were often identified by the care provider without the woman having to verbally express them. Similar to the results of Kennedy et al.[42], most care providers in this study attempted to create a care environment in which women's desires were met and normalcy was preserved.

Limited information was given to the woman and her partner about birthing positions overall, and in a number of cases, birthing positions were only discussed when the duration of second stage labor was longer or progress was limited. This finding was surprising, since women can be made aware or reminded of the possibility to change

Table 3 Adjusted framework for analyzing care provider's communication in enabling women's involvement in shared decision-making during birth.

Category/Concept	The care provider
Communication	
Listening to women	is sensitive and responsive to verbal and non-verbal signs of the woman, ask for feedback from the woman on how she feels.
Empathy	shows concern for the woman's physical and mental well-being, acknowledges women's emotions and the efforts she is making, acts accordingly.
Encouragement	encourages the woman to bring forward wishes and needs for positioning and reassures/affirms/stimulates the woman in her choices and use of choices.
Choices	offers different options and choices, supports the woman in fulfilling her choices.
Information	gives tailored information, gives advice based on the information
Interaction	stimulates the interchange of preferences, values, knowledge and insights attuned to the woman's capacities and the birth context.
Provider style	
Directive	takes an authoritative approach, telling/instructing the woman what to do and how to do it, there is no give and take or conversation but one way communication.
Supportive directive	listens to the woman and responds to her questions, desires for direction but then returns to a supportive role when the question is answer or the need for some direction is met.
Supportive	assumes a role of encouragement, acknowledging the woman, what she is doing but does not offer specific direction.

positions and the diversity of positions available prior to labor and again at the beginning of second stage. To better enable a process of shared decision-making during labor, discussion of birthing positions can begin during antenatal care in combination with information about the active use of different positions in first stage labor. In one study, women stated that the midwife's advice was by far the most important factor that influenced their decision regarding birthing position [24]. Women have also expressed a strong need to be informed about how to prepare physically and mentally for the birth, including the use of birthing positions, during pregnancy [43].

Women who appeared to be more aware of possible birthing positions and who expressed their wishes for certain positions were able to use their preferences. Similarly, in a quantitative study among Dutch women, researchers demonstrated that women with strong preferences were more likely to use their preference [21].

Not surprisingly, a longer duration of second stage as described by the providers or the woman, was a reason to become more active in using different birthing positions, and other quantitative studies document this type of change [21,22]. In these studies, quite often semi-recumbent positions were used and women changed to more upright positions to promote progress. In our study, a number of times women were directed to lie flat on the back to promote the decent of the infant's head under the pubic bone. This may be a site specific approach employed uniquely in this hospital setting as interestingly, there is limited evidence that this approach is valuable.

Care providers seemed to use a more directive style to support women in the actual use of birthing positions rather than a shared decision-making approach which is consistent with the findings of a survey of midwives about their approach to management of second stage labor [44]. We were unable to determine if women minded this directive approach or not with regard to birthing positions. The circumstances in second stage can limit the opportunities to experiment, and women might prefer to be guided if this is done in a supportive, responsive and emphatic way. In either style, a shared decision-making approach can still be an option.

Strengths and limitations

The use of audiotapes provides a unique opportunity to directly explore the day-to-day practices regarding choice and use of birthing positions in second stage labor. The results of this investigation are generalizable to women who are giving birth in hospital settings where midwives, physicians, and nurses are part of the care team. Women in this study did not have doulas which may result in different interactions between the woman and her care providers. Therefore, our results are not generalizable to this group. Although videotapes provide evidence of both non-verbal and verbal interaction and the actual use of birthing positions, video recording may be perceived as more invasive to laboring women. The large number of audiotapes from 2000-2006 could be considered dated but they reflect the realities of clinical practice and the use of evidence on the benefits of changing position and avoidance of supine positions. In the 27 trials included in the meta-analysis on birthing positions all were dated before 2005, except for 3 trials [10,12]. Care providers were aware of the recording, and that could have influenced their practice, but birthing positions were not a topic of interest in the initial parent study so it is unlikely they filtered their communication due to the ongoing investigation.

Conclusion

Women's involvement in shared decision-making during birth is a complex phenomenon. Shared decision-making in other aspects of health care require time, space for conversation, and opportunity to gain insights into the preferences and desires an individual may have

for her health care outcomes [45]. In the context of second stage labor, the process of sharing information, communicating clinical findings and reaching a decision may be more challenging for women then is usually described in the literature on shared decision-making. Labor pain, the need for women to concentrate on coping with the pain, the urgency of certain decisions, and women's pre-existing assumptions and desires all influence the process of shared decision-making. Therefore, enabling women's involvement in decision-making during birth and selection of birthing positions is not a linear process with one correct approach. Instead, the process can be tailored to women's desires, comfort, and preferences while considering the clinical circumstances. Overall, outside of extenuating clinical situations, priority should be given to women's preferences and desires through a process of shared decision-making that is enacted using the varied behaviors and communication patterns, including being interactive, listening to women, offering encouragement, sharing information and choices, using a style of support, and employing empathy.

References

1. Waldenström U. Experience of labor and birth in 1111 women. Journal of Psychosomatic Research 1999;47:471-82.
2. Goodman P, Mackey MC, Tavakoli AS. Factors related to childbirth satisfaction. Journal of Advanced Nursing 2004;46:212-19.
3. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
4. VandeVusse L. Decision making in analyses of women's birth stories. Birth 1999;26:43-50.
5. Lavender T, Walkinshaw SA, Walton I. A prospective study of women's views of factors contributing to a positive birth experience. Midwifery 1999;15:40-6.
6. Green JM. Commentary: what is this thing called "control"? Birth 1999;26: 51-2.
7. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.
8. Parratt J, Fahy K. Trusting enough, to be out of control: a pilot study of women's sense of self during childbirth. Australian Journal of Midwifery 2003;16:15-22.
9. DeClercq ER, Sakala C, Corry MP, Applebaum S. Listening to mothers II. Report of the second national U.S. survey of women's childbearing experiences. New York: Childbirth Connection; 2006.
10. Gupta JK, Hofmeyr GJ, Shehmar M. Position in the second stage of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2012, Issue 5. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub3.
11. De Jonge A, van Diem MTh, Scheepers PLH, van der Pal-de Bruin KM, Lagro-Janssen ALM. Increased blood loss in upright birthing positions originates from perineal damage. BJOG: An International Journal of Obstetrics & Gynaecology 2007;114(3):349-55.
12. Kemp E, Kingswood CJ, Kibuka M, Thornton JG. Position in the second stage of labour for women with epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2013, Issue 1. Art. No.: CD008070. DOI: 10.1002/14651858.CD008070.pub2.
13. Green JM, Coupland VA, Kitzinger JV. Expectations, experiences, and psychological outcomes of childbirth: a prospective study of 825 women. Birth 1990;17:15-24.
14. American College of Nurse-Midwives, Midwives Alliance of North America, National Association of Certified Professional Midwives. Supporting healthy and normal physiologic childbirth: a consensus statement by the American College of Nurse-Midwives, Midwives Alliance of North America, and the National Association of Certified Professional Midwives. Journal of Midwifery and Women's Health 2012;57:529-32.
15. Nieuwenhuijze M, de Jonge A, Korstjens I, Budé L, Lagro-Janssen A. Influence on birthing positions affects women's sense of control in second stage of labour. Midwifery 2013;29:e107-14.
16. Roberts J. The "push" for evidence: management of the second stage. Journal of Midwifery and Women's Health 2002;47:2-15.
17. Wong CA, Scavone BM, Dugan S, et al. Incidence of postpartum lumbosacral spine and lower extremity nerve injuries. Obstetrics & Gynecology 2003;101:279-88.
18. Rossi MA, Lindell SG. Maternal positions and pushing techniques in a non-prescriptive environment. Journal of Obstetric, Gynecologic, & Neonatal Nursing 1986;15:203-8.
19. Hunt LM, Glantz NM, Halperin DC. Childbirth care-seeking behavior in Chiapas. Health Care for Women International 2002;23:98-118.
20. Priddis H, Dahlen H, Schmeid V. Juggling instinct and fear: an ethnographic study of facilitators and inhibitors of physiological birth positioning in two different birth settings. International Journal of Childbirth 2011;1:227-41.
21. Nieuwenhuijze M, de Jonge A, Korstjens I, Lagro-Janssen A. Factors influencing the fulfilment of women's preferences for birthing positions during second stage of labour. Journal of Psychosomatic Obstetrics & Gynecology 2012;33:25-31.
22. De Jonge A, Rijnders MEB, van Diem MTh, Scheepers PLH, Lagro-Janssen ALM. Are there inequalities in choice of birthing position? Sociodemographic and labour factors associated with the supine position during the second stage of labour? Midwifery 2009:25:439-48.

23. Hanson L. Second-stage positioning in nurse-midwifery practices. Part 2: factors affecting use. Journal of Nurse-Midwifery 1998;43:326-330.
24. De Jonge A, Lagro-Janssen ALM. Birthing positions. A qualitative study into the views of women about various birthing positions. Journal of Psychosomatic Obstetrics and Gynecology 2004;25:47-55.
25. Walsh D. Evidence-based care for normal labour and birth: a guide for midwives. London: Routledge; 2007.
26. Kane Low L, Miller JM, Gao Y, Ashton-Miller JA, DeLancey JOL, Sampselle CM. Spontaneous pushing to prevent postpartum urinary incontinence: a randomized, controlled trial. International Urogynecology Journal. 2013;24:453-60.
27. Elo S, Kyngäs H. The qualitative content analysis process. Journal of Advanced Nursing 2008;62:107-15.
28. Low L. K., Martin K, Sampselle C, Guthrie B, Stewart A, Oakley D. Adolescents' experiences of childbirth: contrasts with adults. Journal of Midwifery and Women's Health 2003;48:192-8.
29. Wensing M, Wetzels R, Hermsen J, Baker R. Do elderly patients feel more enabled if they had been actively involved in primary care consultations? Patient Education and Counseling 2007;68:265-9.
30. Elwyn G, Hutchings H, Edwards A, et al. The OPTION scale: measuring the extent that clinicians involve patients in decision-making tasks. Health Expectations 2005;8(1):34-42.
31. Entwistle VA, Watt IS. Patient involvement in treatment decision-making: the case for a broader conceptual framework. Patient Education and Counseling 2006;63:268-78.
32. Bowers BB. Mothers' experiences of labor support: exploration of qualitative research. Journal of Obstetric, Gynecologic, & Neonatal Nursing 2002:31:742-52.
33. Ford E, Ayers S, Wright DB. Measurement of maternal perceptions of support and control in birth (SCIB). Journal of Women's Health 2009;18:245-52.
34. Larkin P, Begley CM, Devane D. Women's experiences of labour and birth: an evolutionary concept analysis. Midwifery 2009;25:e49-59.
35. Schytt E, Green JM, Baston HA, Waldenström U. A comparison of Swedish and English primiparae's experiences of birth. Journal of Reproductive and Infant Psychology 2008;26:277-94.
36. Bergstrom L, Richards L, Morse JM, Roberts J. How caregivers manage pain and distress in second-stage labor. Journal of Midwifery and Women's Health 2010;55:38-45.
37. Sampselle CM, Miller JM, Luecha Y, Fischer K, Rosten L. Provider support of spontaneous pushing during the second stage of labor. Journal of Obstetric, Gynecologic, & Neonatal Nursing 2005;34:695-702.
38. Guba EG, Lincoln YS. Naturalistic inquiry. Newsbury Park: Sage, 1985.
39. Walsh D, Devane D. A metasynthesis of midwife-led care. Qualitative Health Research 2012;22:897-910.
40. Bensing JM, Deveugele M, Moretti F, et al. How to make the medical consultation more successful from a patient's perspective? Tips for doctors and patients from lay people in the United Kingdom, Italy, Belgium and the Netherlands. Patient Education and Counseling 2011;84:287-93.
41. Neumann M, Bensing J, Mercer S, Ernstmann N, Ommena O, Pfaff H. Analyzing the "nature" and "specific effectiveness" of clinical empathy: a theoretical overview and contribution towards a theory-based research agenda. Patient Education and Counseling 2009;74:339-46.
42. Kennedy HP, Shannon MT, Chuahorm U, Kravetz MK. The landscape of caring for women: a narrative study of midwifery practice. Journal of Midwifery and Women's Health 2004;49:14-23.
43. Seefat-van Teeffelen A, Nieuwenhuijze M, Korstjens I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-7.
44. Osborne K, Hanson L. Directive versus supportive approaches used by midwives when providing care during the second stage of labor. Journal of Midwifery and Women's Health 2012;57:3-11.
45. Elwyn G, Frosch D, Thomson R, et al. Shared decision making: a model for clinical practice. Journal of General Internal Medicine 2012;27:1361-7.

6

On speaking terms: a Delphi study on shared decision-making in maternity care

Marianne J Nieuwenhuijze
Irene Korstjens
Ank de Jonge
Raymond de Vries
Toine Lagro-Janssen

Submitted

Abstract

Objective: To identify quality criteria and professional competencies for shared decision-making (SDM) in maternity care and explore the level of consensus among experts. The focus was on decision-making in everyday practice for low-risk women.

Design and settings: An international three-round web-based Delphi study was conducted. Round 1 contained open-ended questions to explore relevant ingredients for SDM in maternity care and to identify the competencies needed for this. In rounds 2 and 3, experts rated statements on quality criteria and competencies on a 1 to 7 Likert-scale. A priori, positive consensus was defined as 70% or more of the experts scoring ≥6 (70% panel agreement).

Participants: The panel included international experts in SDM and in maternity care: midwives, obstetricians, educators, researchers, policy makers and representatives of care users.

Results: Consensus was reached on 45 quality criteria statements and 4 competency statements. SDM was seen as a dynamic process that starts in antenatal care and ends after birth when important decisions made earlier are revisited and discussed. Experts agreed that open and respectful communication between women and care providers is essential; information needs to be accurate, evidence-based, and understandable to women; professional support should prepare women antenatally for unexpected, urgent decisions and respect women's autonomy. Experts were less unanimous on the input of care providers' advice in decision-making and the involvement of women's partners.

Conclusions: SDM in maternity care is a dynamic process that takes into consideration women's individual needs and the context of the pregnancy or birth. The identified ingredients for good quality SDM will help practitioners to apply SDM in practice and educators to prepare (future) professionals for SDM, contributing to women's positive birth experience and satisfaction with care.

Introduction

Women's participation in decision-making is a growing expectation in maternity care. Women want to be involved in the decisions made during this important period of their lives [1-3], seeking to take responsibility for their own health and well-being as well as that of their baby [4]. Involvement in decision-making has a positive effect on their birth experiences and satisfaction with care [5-10]. Care providers play a role in helping women to find, shift, and interpret information [4,11,12]. Women look to their maternity care providers for support in making decisions, but as yet, care providers themselves have little information about the best ways to share decision-making responsibility with their clients.

Shared decision-making (SDM) is widely advocated as a way to support people in their healthcare choices [13-16]. SDM is defined as "an approach where clinician and patient share the best available evidence when faced with the task of making decisions, and where the patient is supported to consider options, to achieve informed preferences" [15]. SDM offers opportunities for greater mutual understanding through a dialogue between patient and care provider. The emphasis is on the process of coming to a decision. Both parties express their preferences, wishes and values, and together they explore beneficial solutions for the given situation. There is an interactive exchange of *professional information* (evidence on and experience with options, benefits, harms and uncertainties), *personal information* (circumstances and quality of life issues), *deliberation* by both parties based on disclosure of values and preferences for the particular situation, and *building towards a consensus-based decision* with shared responsibility. Entwistle [28] advocated a broad conceptualization of patients' involvement in decision-making. She emphasized the importance of the relationship between care provider and patient, where patients are enabled to consider their 'best' option, also taking into consideration individual circumstances from outside the clinical context and where patients can develop a positive sense of involvement.

Maternity care providers can support and advise pregnant women in the many decisions they face during pregnancy, birth and postnatal; enabling women to take charge of their own choices in deliberation with their provider. Professional acceptance of SDM is still developing in maternity care [17,18]. Only recently, systematic reviews reported on decision aids to support women in their choices during pregnancy and birth [19-21]. However, these tools mainly focus on the *information* component of SDM. When making decisions around childbirth, there is more to consider than giving information about the available options. Birth is a family experience influenced by cultural context and beliefs [22-24] and has a large emotional impact [5,25-27]. Decisions in the perinatal period have implications affecting the physical, social, and psychological health of mothers and their babies.

Professional skills are essential for achieving SDM [29]. Therefore, care providers need a clear picture of what contributes to good quality SDM during the perinatal period and what competencies are necessary to support women's involvement in decision-making.

These decisions may comprise choices between equal options that are – based on available evidence – comparable in effect, harms and benefits. But the process of SDM in maternity care is also relevant when options are not equivalent, and a medically preferred option intervenes with women's preferences or beliefs. A careful process of deliberation and exchange can prevent escalation.

Research on SDM in medicine offers insight into the process of SDM in the consultation room [30], but research on SDM in the perinatal period is sparse. This is especially true for SDM in the dynamic process of labour and birth, where time can be limited by the need to make quick, on the spot decisions, and where the pain of the contractions and the need of the woman to stay focused on the birthing process may interfere with interaction and deliberation.

The aim of our study is to gain insight into the process of SDM during maternity care, first to identify and find consensus on ingredients for quality criteria for SDM in different situations during pregnancy and birth, and second to find consensus on professional competencies needed for SDM in maternity care.

Methods

Between September 2012 and June 2013, we conducted a Delphi study. The Delphi method is widely used in health research to gain more understanding and/or consensus about a topic by anonymously bringing together and synthesizing the knowledge of geographically scattered experts [31,32]. A Delphi study consists of series of questionnaires or 'rounds' which are sent to experts to gather information. The definition of 'expert' in this method is related to theoretical knowledge, as well as knowledge from experience.
The research ethics committee of Atrium-Orbis-Zuyd assessed the project and confirmed that ethical approval was not needed (11 September 2012, number 12-N-107).

Expert panel

For our Delphi panel, we invited 71 experts who were active in the fields of SDM (8) and/or maternity care (63), including international opinion leaders. The experts were authors of key articles on SDM in general or on decision-making in maternity care, practitioners supervising pregnancies and births in different maternity care settings, researchers, educators, policy makers and representatives of care users. Because the focus of our study was primarily on decision-making in everyday practice for low-risk women, we invited a disproportionate number of experts from Dutch midwifery. The experts were from Europe (Cypress, Finland, Germany, Italy, Netherlands, Switzerland, UK), North-America (Canada, USA) and Australia; their disciplines included sociology, general medicine, obstetrics, midwifery, nursing, research and medical education.

Design and data collection

The Delphi study had three iterative rounds; communication was in Dutch and English. All the experts were invited to participate via an email informing them of the purpose of the study, the process to be used and the estimated time it would take. Experts were asked for their willingness to participate in all rounds of the Delphi study. We explained that responses were confidential and that participation would be taken as informed consent. A subsequent email was sent to the experts who agreed to participate, containing a hyperlink to the Delphi website where the online Delphi questionnaire could be accessed using a password.

The study team used the responses of the first questionnaire to develop statements on 1) quality criteria for the process of SDM in different situations during the perinatal period and 2) the competencies needed for SDM in maternity care. Subsequent emails with hyperlinks to the questionnaires of Round 2 and 3 were sent to the same pool of experts. In all rounds, non-responders received two reminders by email.

Round 1

Round 1 was exploratory, with the goal of revealing relevant components for the SDM process in different situations during the perinatal period and identifying the competencies needed for this. We used a questionnaire with open-ended questions. First, we asked the experts to describe their initial thoughts on SDM in maternity care and subsequently, we asked them how they would go about the communication process in order to come to shared decisions in different situations during pregnancy and birth.

We introduced Elwyn's three-step model for SDM in clinical practice (Box 1) [33]: (1) choice talk, introducing the need for decision-making; (2) option talk, exploring the options and preferences; (3) decision talk, making the decision; and asked the experts to identify competencies necessary to perform these steps. We used this information to develop a questionnaire with statements on quality criteria and competencies for SDM that was then distributed in Round 2 of the Delphi.

Box 1 Three-step model for SDM in clinical practice [33]

1. **Choice talk,** introducing that a decision-making needs to be made and exploring what role the woman wants to play.
2. **Option talk**, exploring the woman's values and preferences, informing her about the options and its consequences, deliberating with her and involving her partner or significant others.
3. **Decision talk**, making the final decision, safeguarding the woman's sense of autonomy, clarity over the decision and informing other professionals involved in the care for the woman.

Round 2

The goal of Round 2 was to establish consensus about the importance of the statements for good quality of SDM in maternity care. The questionnaire listed 90 statements on quality criteria and competencies, introduced through exemplary cases from maternity care practice. The criteria were phrased in terms of observational behaviour of the care provider. The experts were asked to rate all statements [on a scale ranging from 1 to 7] for their significance for the SDM process in maternity care. Experts were also invited to elaborate on the statements or to suggest additional statements. Before we initiated Round 3, experts were informed of their own individual response to each statement, and the median score and range of the group in Round 2.

Round 3

In Round 3 we aimed to achieve final consensus on the statements where consensus had not been reached. The questionnaire included statements that were retained, modified or redeveloped from the Round 2 responses. Round 3 also allowed experts to edit and comment on the statements.

Data analysis

Responses to the Round 1 questionnaire were grouped to identify recurring themes across experts' responses. We analysed the responses from the user representatives separately to make sure that these were considered. A content analysis framework was used based on Elwyn's three-step model for SDM [33]. Emerging and recurring themes were discussed with all authors and transcribed into statements on quality criteria for the SDM process and competencies needed for SDM in maternity care.

We used 7-point Likert scales ranging from 'strongly disagree' (1) to 'strongly agree' (7) to quantify and compare agreement with the statements in Rounds 2 and 3. A priori [32], we defined positive consensus as 70% or more of the experts scoring ≥6 (70% panel agreement), less than 5% scoring ≤3 (disagree) and a mean score of ≥6 with a standard deviation (SD) of ≤1.1. Negative consensus was defined as 70% or more of the experts scoring ≤2 (70% panel agreement), less than 5% scoring ≥5 (agree), and a mean score of ≤2 with a standard deviation (SD) of ≤1.1. Median scores were calculated to report back to the experts. SPSS version 19.0 was used for the quantitative analyses.

Results

We invited 71 experts (36 midwives, 19 obstetricians, 8 SDM experts, 8 representatives of users), 52 agreed to participate. Eight experts replied they could not participate because of "lack of time". In Round 1, 48 experts filled out the questionnaire; 42 (88%) completed Round 2, and 32 of these 42 (76%) completed Round 3. Their characteristics are presented in Table 1.

Table 1 Socio-demographic characteristics of the experts

	First round N = 48 No. (%)	Second round N = 42 No. (%)	Third round N = 32 No. (%)
Age (mean (SD))	45 (9.4)	45 (9.4)	45 (9.2)
Gender			
female	43 (89.6)	39 (92.9)	30 (93.8)
male	5 (10.4)	3 (7.1)	2 (6.3)
Background			
midwife	31 (64.6)	29 (69.0)	24 (75.0)
obstetrician	9 (18.8)	6 (14.3)	5 (15.6)
physician	3 (6.3)	3 (7.1)	1 (3.1)
representatives of care users	3 (6.3)	2 (4.8)	1 (3.1)
other	2 (4.2)	2 (4.8)	1 (3.1)
Present professional activity*			
maternity care	28 (58.3)	26 (61.9)	22 (68.8)
research	15 (31.3)	11 (26.2)	9 (28.1)
education	11 (22.9)	10 (23.8)	6 (18.8)
professional organisation	5 (10.4)	5 (11.9)	4 (12.5)
policy making	7 (14.6)	4 (9.5)	2 (6.3)
Work experience in years (mean (SD))			
maternity care	12.5 (9.0)	12.0 (9.0)	12.7 (9.0)
Region in which currently active			
Netherlands	32 (66.7)	27 (64.3)	22 (68.8)
Europe	8 (16.7)	9 (21.4)	6 (18.8)
North America	7 (14.6)	5 (11.9)	3 (9.4)
Australia	1 (2.1)	1 (2.4)	1 (3.1)

*More than one professional activity is possible.

Round 1

In round 1, the experts expressed their views on SDM, offered suggestions for the woman-care provider interaction around decision-making and gave detailed input for quality criteria and competencies essential for SDM in different situations during the perinatal period. The main themes identified were: the woman-care provider relationship, care providers' attitude and communication skills, enabling women to participate, exploration of preferences, women's autonomy, information exchange, use of evidence, involvement of partners, tension around decision-making and decision-making when options are not equivalent or in urgent situations. The users in our panel specifically emphasized: being listened to, recognition of autonomy and involvement of the partner. The overall response was that SDM is vitally important for women's well-being and contributes to satisfying relationships between women and care providers. Several members of our expert panel identified "having enough time" and a "trusting woman-

provider relationship" as essential ingredients of SDM. The regular visits during pregnancy offer opportunities to build a relationship, anticipate situations that may occur and revisit complex issues. These visits also offer opportunities for providers to explore women's values and expectations for the upcoming birth, allowing decisions during birth to be facilitated by an understanding fostered previously. Preparing women for an (urgent) decision in birth and discussing choices and preferences were identified as important aspects of antenatal care. Additionally, the experts expressed that providers need to be well-informed and up-to-date on findings from research, able to interpret evidence and apply it to the individual woman. Providers need to adjust their communication to the woman's language when explain evidence. Translating complicated issues, such as risk, in understandable terms for women and their partners was seen as a challenge.

Round 2

Using the responses of round 1, we identified 86 statements about quality criteria and 4 statements about competencies to include in the Round 2 questionnaire. We linked 48 out of the 86 statements to four exemplary decision-making scenarios that occur relatively frequent in maternity care. The other 38 quality criteria statements were linked to specific scenarios where woman-care provider tension influenced the decision-making process; these will be reported in a separate article. The 4 competency statements were relevant for all the scenarios. The four scenarios were:

- Interaction during pregnancy
  - I. around decisions with equal options (24 statements)
  - II. around decisions with a clearly better option (7 statements);
- Interaction during birth
  - III. around decisions with equal options (11 statements)
  - IV. around urgent decisions with a clearly better option (6 statements).

Statements on scenario I, decisions during pregnancy with equal options, illustrate the basic process of SDM in maternity care. The quality criteria statements for this scenario were ordered according to Elwyn's three-step model for SDM [33]: choice talk (5 statements), option talk (14 statements), and decision talk (5 statements). For scenarios II, III and IV, relevant quality criteria statements were added for each scenario. Appendix A presents all the statements and scores from rounds 2 and 3.

In Round 2, consensus was reached on 35 (67%) of the 52 statements (Figure 1). Experts agreed on 31 quality criteria statements. These statements phrased the importance of a respectful dialogue, exploring the role women want to play in the decision-making process, encouraging her to play an active role, exploring her values and preferences, giving women accurate and accessible information and time to process and revisit this information, and making sure women's autonomy is respected. When the options for decision-making are not equivalent, the experts agreed that it is important to listen to the woman and consider her thoughts and opinions.

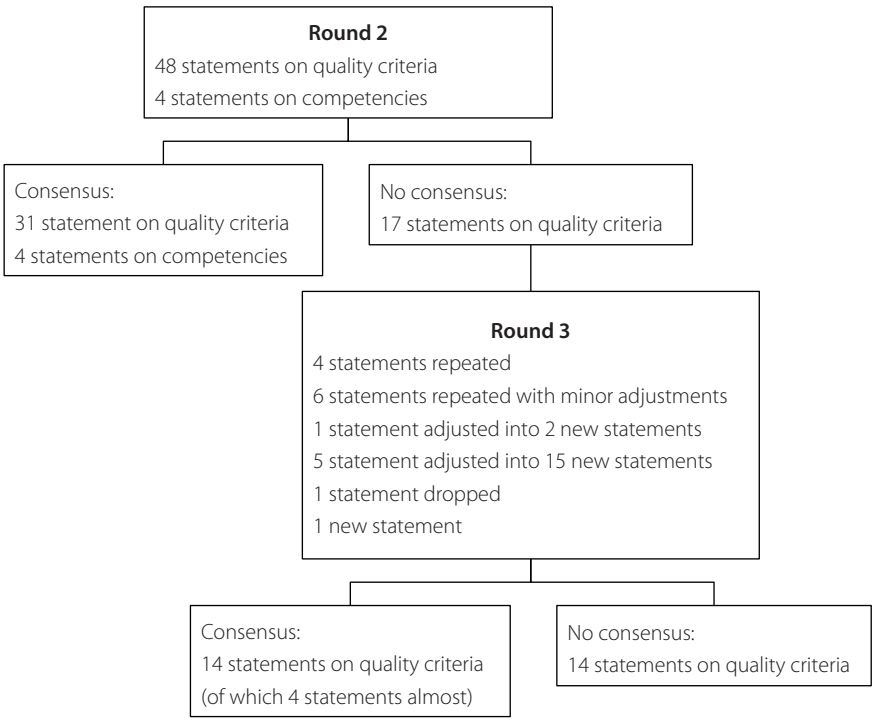


Figure 1 Statements in Delphi round 2 and 3.

There was also consensus on the need for care providers to be able to apply evidence, guidelines, and decision aids to each woman's individual situation.
When time for decision-making was limited during birth, the most important criteria were: preparing women antenatally for the possibility of quick decisions during birth, calmness of the care provider, briefly explaining the situation, seeking the woman's consent and discussing the situation again after birth.

Consensus was reached on all four competency statements, with a level of agreement between 98% and 100%, and with mean scores between 6.6 and 6.7 (SD 0.49 to 0.73).

No consensus

No consensus was reached on 17 quality criteria statements.

There were two topics that showed a wide range in experts' responses: input of the care provider's advice and involvement of the partner in decision-making. We decided to explore these two topics further in round 3, adjusting the five earlier quality criteria statements on these topics to 15 new statements to clarify where experts agreed.

Our findings in Round 2 led us to rephrase 6 statements for Round 3. We reworked 1 statement into 2 new ones, dropped 1 statement and added 1 new statement. In total, the Round 3 questionnaire contained 28 quality criteria statements for decision-making in pregnancy and birth (Figure 1).

Round 3

In this round, consensus was achieved on 10 of the 28 statements (36%), which led to a total of consensus in this Delphi study on 45 quality criteria statements and 4 competency statements (Figure 1). Another 4 statements nearly reached consensus with more than 70% (72 to 82%) of the experts scoring ≥ 6, but mean scores just below 6.

Experts agreed that for a good quality of SDM it is important that *communication*: should comprise an open dialogue with respect and empathy, and that care providers use understandable language, make clear agreements, are prepared to discuss decisions several times and make sure that other care providers are informed about the woman's decisions. The *information* should be complete, evidence-based, and adjusted to women's knowledge. Care providers should *support* women to be actively involved, identify their preferences and underlying motives, take time to process and revisit decisions, and respect women's autonomy.

In case of no equivalent options for decision-making, listening, explaining and checking women's understanding are important for *communication*. *Supporting* women by allowing them to explain their viewpoints, giving them accurate *information* and explicitly obtaining their consent were also seen as contributing to good quality decision-making in these situations.

During birth, experts agreed that it was important for good *communication* to be calm and to take time to explain even if those explanations must be brief in acute situations. Experts acknowledged that it was especially important to discuss the situation again after the birth (100% consensus; mean 6.9, SD 0.35). To *support* women's involvement in decision-making during birth, experts agreed that preparations should start during antenatal care, making women aware that unforeseen decisions can occur and that time for decision-making may be limited, and that women's expectations and preferences should be explored. During birth, providers should still seek women's consent.

No consensus

After two rounds, no consensus was reached on the statements for the introduction of the "choice talk" [33] or on encouraging women to seek information from sources other than the care provider (agree: 55%; disagree: 10%). Also the experts did not reach full agreement on the statement *"Evidence-based guidelines are in principal the basis for decision-making"* (agree 69%, disagree 6%; mean 5.8 SD 1.24).

Care providers' advice

In the further exploration of the topic on the input of care providers' advice, the experts agreed on the statements *"The care provider makes sure that her/his preference is not forced upon the woman"* and *"The care provider puts forward her/his viewpoint based on evidence about the benefits and harms"*. Another statement nearly reached negative consensus: "*The care provider will never give her/his advice*" (disagree 69% (≤ 2), agree 3% (≥5); mean 2.3 SD 1.20). Experts did not reach agreement on providers putting forward professional experience in their advice and were mainly negative about providers putting forward personal experience or their own preferences.

Involvement of the partner

Regarding the involvement of the partner in the decision-making process, experts agreed that partners should be involved in communication around information and deliberation of care options, but they did not reach consensus on involving partners in the final decision (59% agree, 3% disagree; mean 5.6, SD 1.01), or on the partner making the decision when the woman is unable to respond during birth (under the condition that the woman has consented) (53% agree, 3% disagree; mean 5.4, SD 1.08).

We ended the Delphi after the third round because saturation for consensus seemed to be reached. Table 2 shows the 45 quality criteria statements and 4 competency statements on which consensus were reached.

Table 2 Statements on quality criteria and competencies that reached consensus

I. Interaction around decisions during PREGNANCY with equal options Decisions with more or less equal (treatment) options or decisions with inconclusive evidence that one option is better than the others.
The care provider creates an open dialogue to discuss the choices and decisions based on respect, empathy, trust and comfort.
The care provider explores which role the woman is willing to play in the decision-making process.
The care provider encourages all women to play an active role in the decision-making process and supports her throughout.
The care provider explores the values and preferences of the woman.
The care provider explores the underlying motives for the woman's preferences.
The care provider is aware of the available evidence, guidelines and decision aids, is capable of assessing their quality, and can apply them to the woman's individual situation.
The care provider provides objective and accurate information on the available options.
The care provider informs the woman using accessible language tailored to her social and cultural background.
The care provider explores available options, also those the woman is not immediately interested in.
The care provider explores what the woman already knows and provides additional or corrective information if necessary.
The care provider gives the woman ample time and space to process this information.
Complex decisions are discussed over the course of several consultations.
With the woman's consent, the care provider will involve the partner in the decision-making process.
The care provider involves the partner in the conversation around information.
The care provider involves the partner in the deliberation of the options.
The care provider respects the woman's choice to involve a third party in the decision-making process.
The woman should always feel autonomy in the decision-making process.
Once a decision is taken, it is clearly stated.
The care provider verifies whether the decision was understood.
The care provider stresses that the woman can change her mind about her decision at any time.
During the pregnancy, the care provider revisits the decisions that were made.
The care provider will inform other care providers involved in the care for the woman about the woman's decisions and underlying motivations with.
The care provider makes sure that the autonomy of the woman is respected
The care provider makes sure that her/his preference is not forced upon the woman.
The care provider puts forward her/his viewpoint based on evidence about the benefits and harms.

Table 2 Continued

II. Interaction around decisions during PREGNANCY with a clearly better option Decisions with an option that is clearly better - based on research or experience.
If there is an option that is clearly better, the care provider will explain this to the woman.
The care provider encourages the woman to express her thoughts and opinions.
The care provider listens to and respects the woman's input.
The care provider ensures that the woman has understood the information provided.
If the woman is responsive, the care provider will always ask for informed consent.
III. Interaction around decisions during BIRTH with equal options Decisions with more or less equal (treatment) options or decisions with inconclusive evidence that one (treatment) option is better than the others.
During the pregnancy, the care provider discusses the possibility of unforeseen decision moments during birth.
During the pregnancy, the care provider explores with the woman possible dilemmas surrounding decisions during birth.
During the pregnancy, the care provider discusses the woman's needs, preferences and expectations concerning labour and birth, and puts the preferences on paper (e.g. in a birth plan).
The care provider makes it clear that the woman can change her mind about any decisions and choices regarding her birth plan.
Preferably, a woman in labour should not be confronted with choices or decisions for the first time.
The care provider exudes calm and takes the time to explain and discuss the situation.
The care provider briefly describes the essence of the situation and the available options.
The care provider always checks whether the woman has heard and understood her/him.
The woman will always be asked for her consent.
IV. Interaction around urgent decisions during BIRTH with a clearly better option Urgent decisions with an option that is clearly better - based on research or experience.
During the pregnancy, the care provider explains that acute situations may arise during birth that require quick decisions.
The care provider takes a moment to explain the situation to the woman and her partner.
The care provider strives to eliminate a rushed feeling.
During an acute situation, the care provider explains that s/he will take the lead.
If possible, the care provider obtains the explicit consent of the woman before taking any measures.
The care provider will discuss the situation again after the birth.
V. Competencies
Establish a relationship and open dialogue with the woman (and her partner) based on respect and recognition of cultural diversity.
Evaluate available evidence and experience, and provide the woman with accurate, honest information in the context of her individual situation.
Enable and activate the woman to participate in the decision-making process, support her to deliberate about the options and express her preferences and views.
Reduces tension and guides the process to reach a shared decision.

Discussion

A three-round Delphi study was conducted to identify quality criteria and professional competencies for SDM in maternity care and to explore the level of consensus among experts. Consensus was reached on 45 quality criteria statements and 4 competency statements.

SDM was seen as a dynamic process starting in antenatal care and ending after birth with reflection on important decisions. Experts agreed that women should be encouraged to actively participate in decision-making. They also agreed that: open and respectful communication between women and care providers is essential; information should be accurate, evidence-based and understandable to women; professional support should prepare women antenatally for the possibility of unexpected, urgent decisions and should recognize women's autonomy. Experts were less unanimous on the input of care provider's advice in decision-making and the involvement of the partner.

Strengths and weaknesses

In this study we explored a topic that is very relevant for everyday maternity practice and so far has received little attention in research.

Strength of the study is the use of a Delphi consensus process. Boulkedid [31] confirms that a Delphi is very appropriate for identifying quality criteria for health care and we applied their recommendations for planning, using, and reporting the Delhi procedure. Experts of a Delphi on quality of care should reflect the full range of stakeholders [31]. Diverse stakeholders often have different points of view about quality of care [34], which may enrich the results. Our international expert panel included health professionals (midwives and obstetricians), representatives of users and SDM methodologists. A potential weakness is the skewed expert demographics. Because the focus of our study was primarily on decision-making in everyday practice for healthy women, the majority of the experts were Dutch midwives. However, we kept a critical cut-off level by requiring less than 5% scoring of ≤3 (disagree) before accepting consensus, thus guaranteeing that if more than two experts disagreed with a statement, it would not be accepted. Only a few user representatives engaged in the study. It is possible that unfamiliarity with the Delphi technique played a role in their willingness to participate. Their responses to the open-ended questions of Round 1 were of high value for the development of the statements for rounds 2 and 3, but our findings need to be validated in larger groups of users. The fact that the experts were all from high-income countries should be considered when applying the quality criteria and competencies in care for women from other cultural backgrounds [35,36].

From the invited experts, 32% did not participate in the Delphi, mainly because of lack of time. Despite our information beforehand explain the Delphi procedure, two reminder e-mails in each round, and feedback after Round 2, nearly one-third of the

participants dropped-out. A Delphi study is a long process which makes it harder for participants to make a full commitment; the numbers of drop-outs are comparable with other Delphi studies [37-39].

We asked the participants to rate the criteria only on "importance" of the statement for the quality of decision-making. Preferably, factors such as feasibility are also considered. However, the questionnaire was extensive and we were sensitive to the burden placed on the experts.

General results in context

Several studies describe key elements of SDM [33,39-41]. Our study found similar key elements for SDM in maternity care: open dialogue, stimulating women to participate in decision-making, interactive exchange of accurate information tailored to women's individual understanding, and giving women sufficient time to consider options.

Additionally, we identified new elements with specific importance for SDM in maternity care. Many decisions in maternity care are made outside the consultation room, when women are labouring and time is limited. Nevertheless, women want to participate in decision-making during birth [2,5]. Specific quality criteria were identified for SDM during birth, including situations with urgent decision-making. Full SDM is not always possible in these situations, but preparations during pregnancy, a trusting relationship, briefly explaining what is happening and discussing the decisions again after birth, will enhance women's feeling of involvement [9,10,42]. Although evidence is limited, studies in other medical fields indicate that there is no evidence that SDM is not feasible in emergency situations [43].

SDM is sometimes presented as the choice between treatment options [36]. In maternity care, decisions are often about choosing between 'watchful waiting' and intervening to address a possible risk of adverse outcomes. These two options are sometimes hard to compare as the meaning of a relatively higher risk is open to individual interpretation, and certain interventions (e.g. a hospital birth) may have consequences for women's preferences or existential view of life. SDM is highly relevant in these situations with early, respectful deliberation, clear explanation of different options, and encouragement for women to express their thoughts and opinions [44,45].

Others found that patients seemed to place more value on the process of involvement in sharing decisions than on who finally makes the decision [46]. Our findings also emphasize the importance of a focus on the process in SDM: a process that starts in pregnancy and ends after birth – when important decisions are revisited and discussed – and that aims for mutual understanding of preferences, values, and evidence.

Specific results in context

Experts were hesitant about the contribution of care providers' advice in SDM. They seem reluctant to exert a strong influence on women's choices and see providers' primary role

as supporting women to make their own choices. However, literature on SDM indicates that care providers can introduce their own opinions and experiences, when done in an unthreatening way [30]. Given the many events in pregnancy and childbirth and an overwhelming amount of information, women often ask care providers for advice. This underscores SDM in maternity care as a dynamic process, in which providers need to find a balance between supportive and directive approaches suited to the context and the needs of the woman [47]. In some circumstances, e.g. choices around prenatal screening, the emphasis is on supporting women to make their own choice, while on other occasions, e.g. in emergencies, a more directive approach – based on antenatal discussions – may be necessary.

Experts in our panel were also hesitant to give the partner a full part in the making of the decision. They agreed that the partner should be involved when giving information and deliberating the options, but felt that the final decision-making lies with the woman. There is a legal base for this and experts' cautiousness may be based on the vulnerability of some women in the relationship with their partner. However, it is possible that women, recognizing that they can be withdrawn into themselves during birth, may have agreed beforehand that their partner will be their advocate for the decisions that must be made. In Round 1, the user representatives frequently emphasized the involvement of their partners in every aspect of decision-making. It is important to recall that the perinatal period is a transition to parenthood for the partner as well. The partner should feel involved and recognized as there is a responsibility for the child from the minute it is born and mutual involvement is a strong base for the start of a good family life [48,49]. Care providers have the difficult task to assess each time whether partner's involvement benefits the woman, and try to act accordingly.

The fact that women are involved in decision-making gives them a share of the responsibility for the choices and the outcomes. Several experts in our panel remarked that this could be a burden to women, especially if the outcome is disappointing. Skilful providers offer support, but it may not always be easy to identify when support is needed, leading to patients' perception of 'abandonment' [45]. Women and their partners should also be made aware that not everything in pregnancy and birth can be controlled, unexpected things may happen. Even though the responsibility is shared, this does not mean that care providers are less responsible. Discourses of equality in responsibility can hide the fact that the health professional has legal obligations in the event of a poor outcome [50].

Further needs for research

Our study is only one of the steps towards full understanding and use of SDM in maternity care. Next, the results of this Delphi have to be brought back to a comprehensive set of quality criteria, which need to be validated in larger groups of care users and different maternity care professionals. Additional research is needed to explore the feasibility and

performance of the quality indicators in everyday practice and to identify interventions, education programmes and implementation strategies that can support users and professionals in the application of SDM in practice.

Conclusion

SDM in maternity care is a dynamic process taking into consideration women's individual needs and the context of the pregnancy or birth. The identified ingredients for good quality SDM will help practitioners to apply SDM in practice and educators to prepare (future) professionals for SDM. Supporting women in the many decisions they face during the perinatal period will contribute to a positive birth experience and satisfaction with care.

Based on our results, we recommend an active and committed role of the professional, and a decision-making process that is tailored to the needs, circumstances, and capacities of women. This process should be characterized by openness, a willingness to explore options, and mutual respect.

Acknowledgement

We gratefully thank all the experts for sharing their thought and the time they put into this study.

References

1. Hendrix M, van Horck M, Moreta D, et al. Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:537-42.
2. Gamble J, Creedy D, Teakle B. Women's expectations of maternity services: a community-based survey. Women and Birth 2007;20:115-20.
3. DeClercq ER, Sakala C, Corry MP, Applebaum S. Listening to mothers II. Report of the second national U.S. survey of women's childbearing experiences. New York: Childbirth Connection; 2006.
4. Seefat-van Teeffelen A, Nieuwenhuijze M, Korstjens I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-27.
5. Elmir R, Schmied V, Wilkes L, Jackson D. Women's perceptions and experiences of a traumatic birth: a meta-ethnography. Journal of Advanced Nursing 2010;66:2142-53.
6. Dahlen H, Barclay L, Homer CSE. The novice birthing: theorising first-time mothers' experiences of birth at home and in hospital in Australia. Midwifery 2008;26:53-63.
7. Christiaens W, Bracke P. Assessment of social psychological determinants of satisfaction with childbirth in a cross-national perspective. BMC Pregnancy and Childbirth 2007;7:26.
8. Goodman P, Mackey MC, Tavakoli AS. Factors related to childbirth satisfaction. J Adv Nurs 2004;46:212-219.
9. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
10. Hodnett E. Pain and women's satisfaction with the experience of childbirth: a systematic review. American Journal of Obstetrics & Gynecology 2002;186:S160-72.
11. Politi MC, Lewis CL, Frosch DL. Supporting shared decisions when clinical evidence is low. Medical Care Research and Review 2012:70:113S-28S.
12. Hibbard JH, Peters E. Supporting informed consumer health care decisions: data presentation approaches that facilitate the use of information in choice. Annual Review of Public Health 2003;24:413-33.
13. Raad van de Volksgezondheid en Zorg [Council for Public Health and Health Care]. De participerende patient [The participating patient]. Den Haag : RVZ; 2013.
14. Härter M, Elwyn G, Van der Weijden T. Policy and practice developments in the implementation of shared decision-making: an international perspective Z. Evid. Fortbild. Qual. Gesundh. wesen 2011;105:229–33.
15. Elwyn G, Laitner S, Coulter A, Walker E, Watson P, Thomson R. Implementing shared decision making in the NHS. British Medical Journal 2010;341:971-3.
16. Institute of Medicine, Committee on Quality of Health Care in America. Crossing the quality chasm: a new health system for the 21st century. Washington DC: National Academy Press; 2001.
17. Patel N, Rajasingam D. User engagement in the delivery and design of maternity services. Best Practice & Research in Clinical Obstetrics and Gynaecology 2013;27:597-608.
18. Gee RE, Corry MP. Patient engagement and shared decision making in maternity care. Obstetrics & Gynecology 2012;120:995-7.
19. Vlemmix F, Warendorf J, Rosman A, et al. Decision aids to improve informed decision-making in pregnancy care: a systematic review. BJOG: An International Journal of Obstetrics & Gynaecology 2013;120:257-66.
20. Dugas M, Shorten A, Dubé E. Decision aid tools to support women's decision making in pregnancy and birth: A systematic review and meta-analysis. Social Science & Medicine 2012;74:1968-78.
21. Say R, Robson S, Thomson R. Helping pregnant women make better decisions: a systematic review of the benefits of patient decision aids in obstetrics. British Medical Journal Open 2011;1:e000261.
22. Higginbottom GMA, Safipour J, Mumtaz Z, Chiu Y, Paton P, Pillay J. "I have to do what I believe": Sudanese women's beliefs and resistance to hegemonic practices at home and during experiences of maternity care in Canada. BMC Pregnancy and Childbirth 2013;13:51.
23. Lewallen LP. The importance of culture in childbearing. Journal of Obstetric, Gynecologic, & Neonatal Nursing 2011;40:4-8.
24. Redshaw M, Heikkilä K. Ethnic differences in women's worries about labour and birth. Ethnicity & Health 2011;16:213-23.
25. Tschudin S, Alder J, Hendriksen S, et al. Previous birth experience and birth anxiety: predictors of caesarean section on demand? Journal of Psychosomatic Obstetrics & Gynecology 2009;30:175-80.

26. Porter M, Bhattacharya S, van Teijlingen E. Unfulfilled expectations: how circumstances impinge on women's reproductive choices. Social Science & Medicine 2006;62:1757-67.
27. Olde E, van der Hart O, Kleber R, van Son M. Posttraumatic stress following childbirth: A review. Clinical Psychology Review 2006;26:1-16.
28. Entwistle VA, Watt IS. Patient involvement in treatment decision-making: The case for a broader conceptual framework. Patient Education and Counseling 2006;63:268-78.
29. Towle A, Godolphin W. Education and training of health care professionals. In: Edwards A, Elwyn G, editors. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
30. Edwards A, Elwyn G. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
31. Boulkedid R, Abdoul H, Loustau M, Sibony O, Alberti C. Using and reporting the Delphi method for selecting healthcare quality indicators: a systematic review. PLoS One 2011;6:e20476.
32. Keeney S, Hasson F, McKenna H. The Delphi technique in nursing and health research. Chichester: Wiley-Blackwell; 2011.
33. Elwyn G, Frosch D, Thomson R, et al. Shared decision making: a model for clinical practice. Journal of General Internal Medicine 2012;27:1361-7.
34. Hong CS, Atlas SJ, Chang Y, et al. Relationship between patient panel characteristics and primary care physician clinical performance rankings. Journal of the American Medical Association 2010;304:1107-13.
35. Suurmond J, Seeleman C. Shared decision-making in an intercultural context. Barriers in the interaction between physicians and immigrant patients. Patient Education and Counseling 2006;60:253-9.
36. Charles C, Gafni A, Whelan T, O'Brien MA. Cultural influences on the physician–patient encounter: The case of shared treatment decision-making. Patient Education and Counseling 2006;63:262-7.
37. De Bruin-Kooistra M, Amelink-Verburg MP, Buitendijk SE, Westert GP. Finding the right indicators for assessing quality midwifery care. International Journal for Quality in Health Care 2012;24:301-10.
38. Elwyn G, O'Connor A, Stacey D, et al. Developing a quality criteria framework for patient decision aids: online international Delphi consensus process. British Medical Journal 2006;333:417.
39. Padgett K, Rhodes C, Lumb M, et al. What matters to users of services? An explorative study to promote shared decision making in health care. Health Expectations 2012. Doi: 10.1111/j.1369-7625.2012.00767.x.
40. Kasper J, Hoffmann F, Heesen C, Köpke S, Geiger F. MAPPIN'SDM – The Multifocal Approach to Sharing in Shared Decision Making. PLoS ONE 2012;7:e34849.
41. The Salzburg Statement on Shared Decision Making. Salzburg Global Seminar: The greatest untapped resource in healthcare? Informing and involving patients in decisions about their medical care 2010. British Medical Journal 2011;342:d1745.
42. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003; 30:235-47.
43. Flynn D, Knoedler MA, Hess EP, et al. Engaging patients in health care decisions in the emergency department through shared decision-making: A systematic review. Academic Emergency Medicine 2012;19:959-67.
44. Nieuwenhuijze M, Kane Low L. Facilitating women's choice in maternity care. The Journal of Clinical Ethics 2013;24:276-82.
45. Kukla R, Kuppermann M, Little M, et al. Finding autonomy in birth. Bioethics 2009;23:1-8.
46. Edwards A, Elwyn G. Inside the black box of shared decision making: distinguishing between the process of involvement and who makes the decision. Health Expectations 2006;9:307-20.
47. Nieuwenhuijze M, Kane Low L, Korstjens I, Lagro-Janssen ATM. The role of maternity care providers in promoting shared decision-making regarding birthing positions during second stage labor. Submitted.
48. Johansson M, Hildingsson I. Intrapartum care could be improved according to Swedish fathers: Mode of birth matters for satisfaction. Women and Birth 2013;26:195-201.
49. Redshaw M, Henderson J. Fathers' engagement in pregnancy and childbirth: evidence from a national survey. BMC Pregnancy and Childbirth 2013;13:70.
50. Noseworthy D, Phibbs S, Benn C. Towards a relational model of decision-making in midwifery care. Midwifery 2013;29:e42-8.

Appendix A
Results of the Delphi Shared Decision-making in maternity care, round 2 and 3

Four frequent decision-making scenarios in maternity care were used as introduction to the statements in Delphi round 2 and 3.

I. Interaction around decisions during PREGNANCY Decisions with more or less equal (treatment) options or decisions with inconclusive evidence that one option is better than the others.	**Scenario I** Ms A (gravida 3, para 2; 35 weeks pregnant) and her care provider discuss the plans for her mode of birth, assuming a full term birth. Ms A had a physiological birth the first time and a caesarean section the second time because of a breech presentation. The options and all accompanying pros and cons are discussed.
II. Interaction around decisions during PREGNANCY Decisions with an option that is clearly better - based on research or experience.	**Scenario II** Ms B (gravida 1, para 0) is 42 weeks pregnant. She is diagnosed with an elevated blood pressure. Further treatment is discussed and the care provider suggests induction of labour.
III. Interaction around decisions during BIRTH Decisions with more or less equal (treatment) options or decisions with inconclusive evidence that one option is better than the others.	**Scenario III** Ms C (gravida 2, para 1) is in labour and progressing nicely. The contractions are painful and the care provider notices that the woman is uncomfortable in her current position. The care provider mentions switching to a different birthing position.
IV. Interaction around decisions during BIRTH Urgent decisions with an option that is clearly better - based on research or experience.	**Scenario IV** Ms D (gravida 1, para 0; 40 weeks pregnant) is giving birth in the hospital. She has been pushing for 30 minutes after a normal first stage of labour. The foetal heart sounds indicate foetal distress and the care provider suggests an assisted delivery.

*% agree = % of experts scoring ≥ 6 on 7-point Likert-scale
†% disagree = % of experts scoring ≤ 3 on 7-point Likert-scale

I. Interaction around decisions during PREGNANCY with equal options		Results			
round 2	**round 3**	**round 2**		**round 3**	
1. At the start of the discussion, the care provider clearly indicates the need for a decision.	1. During a conversation on such a topic, the care provider clearly indicates that in the end a decision needs be made.	% agree* % disagree† mean (SD)	45.2 2.4 4.57 (2.09)	% agree % disagree mean (SD)	56.3 3.1 5.41 (1.34)
2. At the start of the discussion, the care provider clearly indicates the timeframe in which a decision must be made.	2. During the conversation, the care provider clearly indicates that there is a timeframe in which a decision needs to be made (not necessarily during this conversation).	% agree % disagree mean (SD)	45.2 26.2 4.88 (1.93)	% agree % disagree mean (SD)	62.5 6.3 5.56 (1.01)
3. The care provider creates an open dialogue to discuss the choices and decisions based on respect, empathy, trust and comfort.		% agree % disagree mean (SD)	92.9 0% 6.57 (0.70)		
4. The care provider explores which role the woman is willing to play in the decision-making process.		% agree % disagree mean (SD)	78.6 2.4 6.10 (1.03)		
5. The care provider encourages all women to play an active role in the decision-making process and supports her throughout.		% agree % disagree mean (SD)	78.6 2.4 6.21 (1.03)		
6. The care provider is aware of the available evidence, guidelines and decision aids, is capable of assessing their quality, and can apply them to the woman's individual situation.		% agree % disagree mean (SD)	92.9 2.4 6.48 (0.92)		
7. The care provider explores what the woman already knows and provides additional or corrective information if necessary.		% agree % disagree mean (SD)	88.1 2.4 6.17 (1.01)		

*% agree = % of experts scoring ≥ 6 on 7-point Likert-scale
†% disagree = % of experts scoring ≤ 3 on 7-point Likert-scale

I. Interaction around decisions during PREGNANCY with equal options		Results	
round 2	**round 3**	**round 2**	**round 3**
8. The care provider provides objective and accurate information on the available options.		% agree 95.2 % disagree 2.4 mean (SD) 6.52 (0.89)	
9. The care provider informs the woman using accessible language tailored to her social and cultural background.		% agree 100 % disagree 0 mean (SD) 6.69 (0.47)	
10. The care provider explores available options, also those the woman is not immediately interested in.	10. The care provider explores available options, also those the woman is not immediately interested in.	% agree 73.8 % disagree 2.4 mean (SD) 5.88 (0.97)	% agree 81.5 % disagree 3.1% mean (SD) 5.88 (0.83)
11. The care provider explores the values and preferences of the woman.		% agree 90.4 % disagree 0 mean (SD) 6.45 (0.74)	
12. The care provider brings forward her/his own experiences with the different options.	Replaced by statements e., f. and g.	% agree 14.3 % disagree 33.3 mean (SD) 4.02 (1.46)	
13. The care provider will only offer her/his advice and underlying motivations at the woman's request.	Offered as m., complemented by statements i., j., k., and l.	% agree 21.4 % disagree 42.9 mean (SD) 3.95 (1.74)	
14. The care provider gives the woman ample time and space to process this information.		% agree 92.9 % disagree 0 mean (SD) 6.50 (0.63)	
15. Complex decisions are discussed over the course of several consultations.		% agree 92.9 % disagree 2.4 mean (SD) 6.36 (0.79)	

16. The care provider encourages the woman to obtain information from different sources (friends/family, consulting other experts or the Internet, etc.) and discuss this with her/him.	15. The care provider encourages the woman to obtain information from different sources (friends/family, consulting other experts or the Internet, etc.) and discuss this with him/her.	% agree 54.8 % disagree 9.5 mean (SD) 5.33 (1.39)	% agree 65.6 % disagree 6.3 mean (SD) 5.38 (1.16)
17. With the woman's consent, the care provider will involve the partner in the decision-making process.		% agree 78.6 % disagree 4.8 mean (SD) 6.00 (1.06)	
18. The care provider respects the woman's choice to involve a third party in the decision-making process.		% agree 81 % disagree 0 mean (SD) 6.17 (0.91)	
19. The woman should always feel autonomy in the decision-making process.		% agree 85.7 % disagree 0 mean (SD) 6.33 (0.90)	
20. Once a decision is taken, it is clearly stated.		% agree 92.9 % disagree 0 mean (SD) 6.45 (0.71)	
21. The care provider verifies whether the decision was understood.		% agree 95.2 % disagree 0 mean (SD) 6.64 (0.57)	
22. The care provider stresses that the woman can change her mind about her decision at any time.		% agree 85.7 % disagree 0 mean (SD) 6.33 (0.90)	
23. During the pregnancy, the care provider revisits the decisions that were made.	22. During the pregnancy, the care provider revisits the decisions that were made.	% agree 69 % disagree 2.4 mean (SD) 5.86 (1.00)	% agree 78.1 % disagree 3.1% mean (SD) 6.00 (1.02)
24. The care provider will inform other care providers involved in the care for the woman about the woman's decisions and underlying motivations with.		% agree 81 % disagree 2.4 mean (SD) 6.29 (1.02)	
	a. (new): The care provider explores the underlying motives for the woman's preferences.		% agree 84.4 % disagree 0 mean (SD) 6.31 (0.74)

II. Interaction around decisions during PREGNANCY with an option that is clearly better		Results			
round 2	**round 3**	**round 2**		**round 3**	
25. If there is an option that is clearly better, the care provider will explain this to the woman.		% agree % disagree mean (SD)	92.9 2.4 6.36 (0.96)		
26. If a better option exists, the care provider will use information to direct the woman to this option.	Based on comments from the experts this statement was deleted in round 3.	% agree % disagree mean (SD)	40.5 23.8 4.83 (1.67)		
27. The care provider encourages the woman to express her thoughts and opinions.		% agree % disagree mean (SD)	100 0 6.71 (0.46)		
28. The care provider listens to and respects the woman's input.		% agree % disagree mean (SD)	95.2 0 6.64 (0.58)		
29. The care provider ensures that the woman has understood the information provided.		% agree % disagree mean (SD)	97.6 0 6.76 (0.48)		
30. If the woman is responsive, the care provider will always ask for informed consent.	30. If the woman is responsive, the care provider will always ask for informed consent.	% agree % disagree mean (SD)	76.2 4.8 6.12 (1.25)	% agree % disagree mean (SD)	93.8 3.1% 6.63 (0.91)
31. The involvement of the woman in the decision-making process will take place within the medical frameworks set by the care provider.	31. Evidence-based guidelines are in principal the basis for decision-making.	% agree % disagree mean (SD)	47.6 19 4.88 (1.77)	% agree % disagree mean (SD)	68.8 6.3 5.78 (1.24)

III. Interaction around decisions during BIRTH with equal options		Results			
round 2	**round 3**	**round 2**		**round 3**	
32. During the pregnancy, the care provider discusses the most common decision-making points during active labour.	32a. During the pregnancy, the care provider discusses the possibility of unforeseen decision moments during birth.	% agree % disagree mean (SD)	71.4 7.1 5.81 (1.29)	% agree % disagree mean (SD)	75 0 5.84 (0.77)
	32b. During the pregancy, the care provider explores with the woman possible dilemmas surrounding decisions during birth.			% agree % disagree mean (SD)	71.9 3.1% 5.81 (0.90)
33. During the pregnancy, the care provider discusses the woman's needs, preferences and expectations concerning labour and birth, and puts the preferences on paper (e.g. in a birth plan).		% agree % disagree mean (SD)	90.5 0 6.43 (0.67		
34. The care provider makes it clear that the woman can change her mind about any decisions and choices regarding her birth plan.		% agree % disagree mean (SD)	90.5 0 6.50 (0.74)		
35. The woman should not be confronted with choices or decisions for the first time during active labour.	35. Preferably, a woman in labour should not be confronted with choices or decisions for the first time.	% agree % disagree mean (SD)	73.8 4.8 5.90 (1.25)	% agree % disagree mean (SD)	81.3 0 6.25 (0.76)
36. The care provider exudes calm and takes the time to explain and discuss the situation.		% agree % disagree mean (SD)	97.6 0 6.69 (0.60)		
37. The care provider briefly describes the essence of the situation and the available options.		% agree % disagree mean (SD)	92.9 4.8 6.19 (1.11)		
38. The care provider always checks whether the woman has heard and understood her/him.		% agree % disagree mean (SD)	95.2 0 6.50 (0.59)		
39. The care provider will explain her/his preference at the woman's request.	Replaced by statements d. and h.	% agree % disagree mean (SD)	45.2 16.7 5.02 (1.47)		

III. Interaction around decisions during BIRTH with equal options		Results			
round 2	**round 3**	**round 2**		**round 3**	
40. The care provider will inform the partner (and/or third party) and involve them in the decision-making process.	Replaced by statements n., o. and p.	% agree % disagree mean (SD)	50 7.1 5.40 (1.47)		
41. Only if the woman is unresponsive, decisions can be made in consultation with the partner.	Replaced by statement q.	% agree % disagree mean (SD)	50 9.5 5.29 (1.44)		
42. The woman will always be asked for her consent.		% agree % disagree mean (SD)	83.3 2.4 6.38 (0.96)		

IV. Interaction around decisions during BIRTH with urgent decisions and an option that is clearly better		Results			
round 2	**round 3**	**round 2**		**round 3**	
43. During the pregnancy, the care provider explains that acute situations may arise during birth that require quick decisions.		% agree % disagree mean (SD)	76.2 0 6.12 (0.99)		
44. The care provider takes a moment to explain the situation to the woman and her partner.		% agree % disagree mean (SD)	90.5 2.4 6.48 (0.99)		
45. The care provider strives to eliminate a rushed feeling.		% agree % disagree mean (SD)	88.1 4.8 6.21 (1.09)		
46. During an acute situation, the care provider explains that s/he takes charge.	46. During an acute situation, the care provider explains that s/he will take the lead.	% agree % disagree mean (SD)	64.3 19 5.38 (1.77)	% agree % disagree mean (SD)	71.9 9.4 5.59 (1.34)

47. The care provider obtains the explicit consent of the client before taking any measures.	47. If possible, the care provider obtains the explicit consent of the woman before taking any measures.	% agree % disagree mean (SD)	52.4 14.3 5.21 (1.73)	% agree % disagree mean (SD)	84.4 3.1 6.25 (1.11)
48. The care provider will discuss the situation again after the birth.		% agree % disagree mean (SD)	100 0 6.86 (0.35)		

V. Competencies		**Results**	
round 2		**round 2**	
1. Establish a relationship and open dialogue with the woman (and her partner) based on respect and recognition of cultural diversity.		% agree % disagree mean (SD)	97.6 0 6.67 (0.53)
2. Evaluate available evidence and experience, and provide the woman with accurate, honest information in the context of her individual situation.		% agree % disagree mean (SD)	100 0 6.64 (0.49)
3. Enable and activate the woman to participate in the decision-making process, support her to deliberate about the options and express her preferences and views.		% agree % disagree mean (SD)	97.6 0 6.64 (0.53)
4. Reduces tension and guides the process to reach a shared decision.		% agree % disagree mean (SD)	97.6 2.4 6.60 (0.73)

VI. Input of the care provider in the process of shared decision-making.		Results		
	round 3	**round 3**		
	The care provider			
	c. … makes sure that the autonomy of the woman is respected	% agree % disagree mean (SD)	96.9 0 6.56 (0.56)	
	d. … makes sure that her/his preference is not forced upon the woman.	% agree % disagree mean (SD)	90.6 0 6.41 (0.76)	
	e. … puts forward her/his viewpoint based on evidence about the benefits and harms.	% agree % disagree mean (SD)	90.6 3.1 6.25 (0.84)	
	f. … puts forward her/his viewpoint based on professional experience.	% agree % disagree mean (SD)	56.3 3.1 5.50 (1.05)	
	g. … puts forward her/his viewpoint based on personal experience.	% agree % disagree mean (SD)	12.5 46.9 3.75 (1.46)	% disagree (≤2) = 21.9
	h. … puts forward her/his viewpoint based on her/his own preference.	% agree % disagree mean (SD)	3.1 84.4 2.69 (1.26)	% disagree (≤2) = 46.9
	i. … puts forward her/his viewpoint after assessment of the woman's situation.	% agree % disagree mean (SD)	34.4 19.7 4.88 (1.39)	
	j. … only puts forward a viewpoint at the woman's request.	% agree % disagree mean (SD)	21.9 34.4 4.19 (1.53)	
	k. … always offers her/his advice and underlying motivations.	% agree % disagree mean (SD)	53.1 15.6 5.03 (1.75)	

	l. … will never offer her/his advice.	% agree % disagree mean (SD)	3.1 81.2 2.31 (1.20)	% disagree (≤2) = 68.7 % agree (≥5) = 3.1%
	m. … will only offer her/his advice and underlying motivations at the woman's request.	% agree % disagree mean (SD)	12.5 37.5 4.00 (1.59)	

VII. Involvement of the partner in the process of shared decision-making.		**Results**	
	round 3	**round 3**	
	After it is clear that the woman agrees, …		
	n. … the care provider involves the partner in the conversation around information.	% agree % disagree mean (SD)	84.4 0 6.22 (0.87)
	o. … the care provider involves the partner in the deliberation of the options.	% agree % disagree mean (SD)	75 0 5.97 (0.86)
	p. … the care provider involves the partner in the decision.	% agree % disagree mean (SD)	59.4 3.1 5.63 (1.01)
	q. Only when - during birth - the woman is unable to respond can decisions be made in consultation with the partner (on the condition that it is clear that the woman has consented to this).	% agree % disagree mean (SD)	53.1 3.1 5.44 (1.08)

7

Facilitating women's choice in maternity care

Marianne J. Nieuwenhuijze
Lisa Kane Low

The Journal of Clinical Ethics 2013; 24: 276-282

Abstract

Maternity care providers often have strong views concerning a woman's choice of where to give birth. These views may be based on the ethical principle of autonomy, or on the principles of beneficence. The authors propose that an approach utilizing shared decision-making allows care providers and women to move beyond disagreements regarding which evidence on risk should "count", instead adopting a process of increased knowledge and support for women and their partner while they make choices regarding place of birth.

Introduction

The idea that women have a choice regarding where they give birth, at home or in the hospital, has provoked a variety of strong reactions from maternity care providers in many parts of the world. Some care providers view woman as autonomous and able to make informed choices about place of birth, using autonomy as the guiding ethical principle. Others hold that beneficence must be the prevailing principle, and some see a woman who makes a choice to birth outside the hospital as an irresponsible mother, who takes unnecessary risks with her newborn's life [1-3]. In this article we will reflect on these responses and explore whether the model of shared decision-making can help address this complex situation in everyday encounters between care provider and pregnant woman [4].

Supporters and opponents of home birth passionately debate the risks that are involved with either choice. Discussions about the place of birth often proceed as if there is one, universally applicable right answer to the question where a healthy woman with an uncomplicated pregnancy and obstetric history should give birth. In presenting an argument for or against one place of birth over another, care providers often frame there argument as a dispassionate argument that is informed only by scientific evidence [5-9]. But methodological criticism of scientific evidence can lead to different interpretations of study results - which, in turn, can reignite arguments [10,11]. The passion of these arguments affirms the complexity of attempts to integrating the available scientific evidence with the values and beliefs of women and maternity care providers regarding decision-making and place of birth.

Health care's gold standard to determine the "right" or best approach is a randomized clinical trial (RCT) which, despite different attempts, has not been successfully conducted in this area [12]. It is unlikely that a successful RCT will be conducted in the near future, because researchers find that women are not willing to participate in a trial that randomly assigns them to one group in the clinical trial or another (in this case, to be randomly assigned to give birth at home), because women strongly value their autonomy to choose [13,14]. Position statements issued by maternity care provider organizations and editorial commentaries in medical journals [2,15,16] focus on the use of objective data to determine the "right" place of birth for all women, but often ignore the role that values and beliefs play in informing the decisions individuals make regarding childbirth. Birth is more than a medical procedure; it involves the whole of life of those intimately involved [17]. It is a major life event that affects women and their families in physical, emotional, social, and cultural ways. In the context in which a family makes decisions about childbirth, so much is at stake that is difficult to fully articulate. It is not possible to sum up the full picture of harms and benefits that affect all aspects of life in a way that completely illuminates an individual family's decision regarding how and where the mother will give birth.

In determining the best place for birth, many kinds of information are considered and filtered through a woman's personal lens of values and experiences, including her previous

health care experiences. This intimate decision cannot be reduced to ranking the value of autonomy against the value of beneficence. These two aspects of decision-making must be integrated into a single final response. Arguments for the primacy of the principles of beneficence begin with the collection of evidence that identifies one choice as more risky than another, but, in the case of place of birth, the evidence is not yet conclusive for a healthy pregnant woman. On the other hand, arguments based on the principle of autonomy to defend women's freedom omit, in certain circumstances, the complicated question of the autonomy of the future child. The intersection of these two principles is the ethical space in which a decision about place of birth is made. For example, a healthy pregnant woman may feel she does not want to give birth at her local hospital because it is the same location where her mother, who had cancer, was cared for until her death. The woman associates the location with painful memories of the loss of her mother. As a result, she may exercise her autonomy in selecting a home birth to avoid the complex emotions that could have an impact on her labor and birth process. However, should her membranes rupture (her waters break) and she does not go into labor after a day, there can be an increased risk for infection for the newborn. Should the woman's desire to avoid the hospital, where a care provider can promote the labor process using medical interventions, persist, then the question of beneficence is raised. Her autonomous decision to not use the hospital may present a health risk to her newborn. In such circumstances, the intersection of the principles of autonomy and beneficence requires expanded decision-making and understanding between the maternity care provider and the woman regarding her choice of location for giving birth.

Scientific evidence regarding the safety of various places of birth has been used to change the focus from choice of location of birth to that of the moral responsibility of women and care providers to select a place of birth. Scientific evidence may be tailored to coerce, belittle, or frighten a woman into making a particular decision. In some countries, for example, in the USA, discussions of place of birth are grounded in the varied philosophical approaches used by the professional organizations that represent maternity care providers (obstetricians, physicians, nurses and midwives). Physician organizations make an argument against home as a site for birth, and midwifery organizations present scientific evidence that supports home as a safe site for birth, particularly for low risk women [15,18].

For many women, the choice of where to give birth begins in their philosophic approach to life as a whole. They think about giving birth in the context of their personal lived experience, not based on the results of an RCT. Birth decisions are personal, informed by values and beliefs (paradigms or world views) and are contextual; they are not merely fact based, objective, or simply calculated. How one individual interprets her personal risk and what is an acceptable risk compared to benefit, is highly variable when information that is available is not comprehensive or does not include the contextual aspects involved in the decision, including values and beliefs. Building on the prior example we used

regarding the woman who did not want to give birth in the same location as her mother's death, another factor may be the age of the woman making this decision. If the woman has experienced a prior healthy pregnancy and birth and is again having a healthy pregnancy and anticipates a normal course of labor and birth, some maternity care providers would consider her an appropriate candidate for a home birth. However if her age is 40, in some instances, her age may be used to argue that she is not low risk, and therefore not an appropriate candidate for a home birth. Because the literature supporting age as a risk factor is variable, this woman's emotional reasons for avoiding the hospital setting may arguably trump her age as a single risk factor in the context of a healthy pregnancy and otherwise low risk status.

In dealing with ethical dilemmas, ethicists like Parker and Verkerk offer a perspective that suggests these dilemmas must be considered in the encounter between patient and health professional, and not on the professional organization level [19-21]. Parker suggests that the care provider-patient relationship should be characterized by a genuine engagement in the collaborative attempt to achieve shared understanding. Verkerk advocates a perspective of care ethics that addresses ethical dilemmas first by knowing the person involved: understanding her identity, relationships and context. The model underlying this relationship and understanding should be oriented towards the patient making an informed decision through a process of conversation with an engaged and respectful care provider. Rather than debating whether to place a woman's right to autonomy above the presumption of beneficence, it seems that – in line with Parker's and Verkerk's perspective – an alternative direction would be shared decision-making. Rather than creating a hierarchy of ethical principles with either beneficence or autonomy "winning", or according health care professionals an authoritative position that reigns over woman's wishes, shared decision-making allows a new approach that puts the encounter and conversation between patient and health professional as center. Shared decision-making allows both the perspective of autonomy and beneficence to be considered, and includes care providers' perspectives and women's values and beliefs in the process of making a final decision regarding place of birth.

The concept of shared decision-making

Shared decision-making (SDM) is generally defined as "an approach where clinician and patient share the best available evidence when faced with the task of making decisions, and where the patient is supported to consider options, to achieve informed preferences" [22]. SDM emphasizes relationship between care provider and patient, the background of preferences and a process approach to making decision. Both parties can bring forward their preferences, wishes and values, and explore beneficial solutions. In the process of SDM, maternity care provider enable, support and advise pregnant women on the goals

and decisions they face during pregnancy, birth and postpartum. There is an interactive exchange of professional information (options, benefits, harms, uncertainties and experiences) and personal information (circumstances and issues important to quality of life). Deliberation is based on the disclosure of values and preferences regarding the particular situation by both parties, building towards a consensus-based decision based on joint responsibility.

When a shared decision cannot be reached, women can seek another care provider. A challenge in maternity care is that alternative providers may not be available or accessible, particularly when geographic location or a woman's insurance status or method of payment may preclude the use of other care providers. In ideal circumstances, a woman would explore the question of place of birth at initial contact with a care provider. Using a process of active engagement and openly presenting each other's perspectives using a dialectic process, a conclusion that a resolution cannot be reached would occur early enough in the woman's pregnancy to allow her to seek an alternative care provider. When a process of SDM is used, the opportunity to resolve differences is enhanced because there is open, active discussion between the care provider and woman, allowing the woman to be heard and met in her concerns and to build a relationship, rather than engagement at the level of a rhetorical argument of a woman's autonomy to make a decision considered against her infant's safety.

Elwyn et al. [4] developed a model that outlines a step-wise process for SDM. The model includes three key steps for SDM for clinical practice: choice talk, option talk and decision talk, in which a clinician supports deliberation throughout the process (Box 1). Choice talk refers to making sure that patients know that a choice needs to be made and that reasonable options are available. Option talk refers to exploring patients' knowledge and considerations and providing more detailed information about the options. Decision talk refers to supporting deliberation, considering preferences and deciding what is the best option.

SDM offers women and maternity care providers an improved way to address decisions about place of birth and other challenging care decisions, allowing a move from polarized debate on home versus hospital birth to an individualized interaction between the woman and her care provider. In this context, emphasis is placed on process and dialogue, rather than on the presentation of a morally superior approach that privileges medical authority and dispassionate "evidence". The use of SDM allows an individualized contextualized approach that enables the parties involved to determine which motives and values inform the discussion and eventual decision or choices made by the woman and her partner.

Box 1 Summary of SDM model [4]

Choice talk
- Step back
- Offer choice
- Justify choice - preferences matter
- Check reaction
- Defer closure

Option talk
- Check knowledge
- List options
- Describe options – explore preferences
- Harms and benefits
- Provide patient decision support
- Summarize

Decision talk
- Focus on preferences
- Elicit preferences
- Move to a decision
- Offer review

Shared decision-making in maternity care

There is a growing awareness that SDM can play an important role in maternity care [23,24], as it offers opportunities for greater mutual understanding through a process of exchange and dialogue. SDM recognizes that a woman's values and preferences, and a care provider's values, expertise and understanding from research are essential in decision-making. Care providers and women are able to openly discuss the benefits, harms and uncertainties of different options. Consistent with Entwistle and Watt [25] SDM allows a broad conceptualization of patients' involvement in decision-making, recognizing the importance of the relationship between care provider and patient. Patients are enabled to consider their 'best' option, where their individual circumstances from outside the clinical context are taken into consideration; patients can develop a positive sense of involvement in a holistic process.

Women's views

In maternity care, most women want to participate in making decisions regarding their care [26-28]. In a survey of 1573 American women who had given birth in the hospital at least once, most women (73 percent) said they should make decisions after consulting their care provider, and 23 percent supported shared mother-care provider decision-making as a way to reach a final decision [29]. However, not all women are willing or prepared to

participate in the decision-making process. Some women who are not literate regarding health or who have difficulty understanding data or the concept of risk may have difficulty with shared decision-making, and some may come from a cultural background that lacks a tradition of individuals making autonomous decisions [30]. There is evidence that the degree of involvement in making decisions during birth vary among women [31]. For some women involvement in making shared decisions increased with the feeling that they were informed and could challenge a decision if the need arose [32]. In one study, Parratt and Fahy found that women who felt supported during childbirth by people they trusted, felt free 'to let go' and not try to exert control over events or over behaviour [33]. Making health care decision around birth is not without concerns for women, and taking full responsibility for decisions can be a burden for women and their partners. Leaving the responsibility of making decisions with a woman, without first exploring her wishes for involvement in making decision, may evoke feelings of abandonment [34].

Some care providers report that SDM lifts the burden of responsibility for certain choices from their shoulders [35]. The rationale for this perception of reduced responsibility or shared responsibility is that women actively participated in making decisions, and thus they carry a greater level of responsibility than if the care provider alone is directing their care, including choices of the site of birth. However, participation in decision-making can be a great burden for women, especially when the outcome is disappointing. Women and their partners should be made aware that not everything is 'knowable' and 'controllable' - unexpected things might happen during birth. Additionally, even when a decision is shared and a spirit of joint responsibility for the outcome is present, it does not mean that care providers are absolved of their professional obligations and responsibilities. Discourses on equality can hide the fact that health professionals have legal obligations in the event of a poor outcome [36]. The overlay of legal responsibility and potential for liability can challenge the process of shared decision-making if concern for liability becomes the prevailing feature of the interaction between the care provider and the pregnant woman.

Challenges and opportunities

SDM in maternity care offers both challenges and opportunities. Many decisions made in maternity care take place outside the consultation room. During birth, the decision-making process may be influenced by limited time, the pain of contractions, and the need of the woman to stay focused on the birthing process, which interferes with interaction and elaboration of the options and decisions that need to be made. Through discussions of options and preferences during pregnancy, prior to birth, women should be prepared for the possibility that they may be asked to make urgent decisions during childbirth [28,35,36]. Regular checkups during pregnancy offer ample opportunity to establish a trusting relationship, anticipate various situations that may arise, revisit complex issues, and let time do its work. There is also time for care providers to understand the values and expectations a woman and her partner have for the upcoming birth, so that discussions

during labor and birth are facilitated by the trust and understanding that have been fostered previously.

Shared decision-making in action

What takes place in the day-to-day reality of practice? In a recent study about women's childbearing experience in the U.S. [37], a significant number of women said they felt pressure from a care provider to agree to having an intervention during birth. For example, 19 percent of the women who did not have epidural analgesia felt pressure to have it, and 28 percent of the women who had a vaginal birth after a cesarean felt pressure during their pregnancy to choose a repeat cesarean. This study also explored how much women felt involved in the decision-making process around certain interventions, for example, the decision for either a repeat cesarean or a vaginal birth after cesarean in a previous birth. In 40 percent of the cases, women reported that they felt it was mainly their decision, and in another 39 percent, it was a decision made together by the woman and the care provider. One in five women stated it was mainly the care provider's decision. When asked, "How much did you and your maternity care provider talk about the reasons you might not want to have a repeat caesarean?" 40 percent of the women indicated there was no talk about not scheduling a repeat cesarean, and only 20 percent said there was "a lot" of talk about it. In contrast, when talking about "reasons you might want to have a repeat caesarean," the women indicated that only 3 percent "did not talk about having a repeat caesarean," and 40 percent talked "a lot" about having a repeat caesarean. When care providers expressed their opinion about a preferred option (73 percent), it was mostly in favor of an intervention (88 percent). This reported variance in presenting options highlights the influence of values and beliefs and a potential fear of liability by the care providers in the study, since the evidence base available suggests there are benefits to not having a repeat cesarean except in unique circumstances, including considerations of the woman's desire for more children [29,38]. Decisions in maternity care vary; not all are polarized like vaginal birth after caesarean section, place of birth, or elective caesarean without a medical indication. Less-polarized examples can be used to gain deeper insight into the use of SDM in the interaction between care providers and women, for example, women's preferences and needs in the second of stage labor regarding birthing positions. Enabling women to choose and change birthing positions in birth is beneficial for women's positive experience of the birth [39] and for promoting a normal physiological birth [40,41]. In a study focused on the interaction between maternity care providers and women in labor, maternity care providers enabled women's selection of various birthing positions by using a dynamic process in which they moved back and forth from open, informative approaches to more closed, directive approaches, depending on the woman's needs and clinical assessments of the circumstances [42]. The authors report that once a care provider started working with a woman, the woman often began actively working with the care provider, suggesting positions she was first reluctant to use. This give-and-take or dialectic

process combined the preferences of the woman with the ongoing assessments being made by the care provider. The care provider used her expertise to flexibly adjust her approach to match the unique features of the clinical situation in concert with the woman's desires.

Conclusion

The promotion of shared decision-making in maternity care is justifiable and may be valuable in promoting optimal health outcomes for a woman and the newborn. Through the use of shared decision-making as a relational process between women and their maternity care provider, the discussion remains focused on the wide range of elements that are brought to bear in the final choice women make regarding the place of birth. In many cases, shared decision-making allows a balance between autonomy and beneficence, as framed by the women. Through the use of SDM as a process, there is an opportunity to enter into discussion that maintains the integrity of all of the individuals involved. The care provider and the woman participate in the process with the goal of "opening up" the space at the intersection of beneficence and autonomy that can then be contextualized for the individual woman, rather than starting with the stands of professional organizations or with ethical arguments that might create a "forced" choice. Given the impossibility of resolving the beneficence versus autonomy debate over place of birth, SDM provides a relational process, a shared approach that leads to a choice that contributes to optimal physical and psychosocial outcomes for mothers and babies.

References

1. The Lancet. Home birth - proceed with caution. Lancet 2010;376:303.
2. Chervenak FA, McCullough LB, Brent RL, Levene MI, Grünebaum A, Arabin B. Reply to redefining ethics in home birth. American Journal of Obstetrics & Gynecology 2013;209:279-80.
3. Kingma E. The lancet's risky ideas? Rights, interests and home-birth. International Journal of Clinical Practice 2011;65:918-20.
4. Elwyn G, Frosch D, Thomson R, et al. Shared decision-making: a model for clinical practice. Journal of General Intern Medicine 2012;27:1361-7.
5. De Jonge A, van der Goes BY, Ravelli ACJ, et al. Perinatal mortality and morbidity in a nationwide cohort of 529 688 low-risk planned home and hospital birth. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:1177-84.
6. Wax JR, Lucas FL, Lamont M, Pinette MG, Cartin A, Blackstone J. Maternal and newborn outcomes in planned home birth vs planned hospital births: a meta-analysis. American Journal of Obstetrics & Gynecology 2010;203:e1-8.
7. Evers ACC, Brouwers HAA, Hukkelhoven CWPM, et al. Perinatal mortality and severe morbidity in low and high risk term pregnancies in the Netherlands: prospective cohort study. British Medical Journal 2010;341:c5639.
8. Birthplace in England Collaborative Group. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the birthplace in England national prospective cohort study. British Medical Journal 2011;343:d7400.
9. De Jonge A, Mesman JAJM, Manniën J, Zwart JJ, van Dillen J, van Roosmalen J. Severe adverse maternal outcomes among low risk women with planned home versus hospital births in the Netherlands: nationwide cohort study. British Medical Journal 2013;346:f3263.
10. Michal CA, Janssen PA, Vedam S, Hutton E, de Jonge A. Planned home vs hospital birth: a meta-analysis gone wrong. Medscape Ob/Gyn & Women's Health (online). Available from: http://www.medscape.com/viewarticle/739987. Accessed April 2013.
11. Tuteur A. A critique of the leading study of American Home Birth. Available from: http://www.sciencebased-medicine.org/a-critique-of-the-leading-study-of-american-homebirth/. Accessed August 2013.
12. Olsen O, Clausen JA. Planned hospital birth versus planned home birth (Review). Cochrane Database of Systematic Reviews 2012, Issue 9. Art. No.: CD000352. DOI: 10.1002/14651858.CD000352.pub2.
13. Hendrix M, van Horck M, Moreta D, et al. Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. BJOG: An International Journal of Obstetrics & Gynaecology 2009;116:537-44.
14. Dowswell T, Thornton JG, Hewison J, Lilford RJL. Should there be a trial of home versus hospital delivery in the United Kingdom? British Medical Journal 1996;312:753-7.
15. American College of Obstetricians and Gynecologists. Committee opinion no. 476. Planned home birth. Obstetrics & Gynecology 2011;117:425-8.
16. Chervenak FA, McCullough LB, Arabin B. Obstetric ethics: an essential dimension of planned home birth. Obstetrics & Gynecology 2011;117:1183-7.
17. De Vries RG. A pleasing birth: midwifery and maternity care in the Netherlands. Philadelphia: Temple University Press; 2005.
18. American College of Nurse Midwives Position Statement on Home Birth. Available from: http://www.midwife.org/ACNM/files/ACNMLibraryData/UPLOADFILENAME/000000000251/Home%20Birth%20Aug%202011.pdf. Accessed August 2013.
19. Parker M. A conversational approach to the ethics of genetic testing. In: Ashcroft R, Lucassen A, Parker M, Verkerk M, Widdershoven G, editors. Case analysis of clinical ethics. Cambridge, U.K.: Cambridge University Press; 2005.
20. Verkerk M. Care ethics as a feminist perspective on bioethics. In: Gastmans C, Dierickx K, Nys H, Schotmans P, editors. New pathways to European ethics. Antwerp: Intersentia; 2007.
21. Verkerk M. A feminist care-ethics approach to genetics. In: Ashcroft R, Lucassen A, Parker M, Verkerk M, Widdershoven G, editors. Case analysis of clinical ethics. Cambridge, UK: Cambridge University Press; 2005.
22. Elwyn G, Laither S, Coulter A, Walker E, Watson P, Thomson R. Implementing shared decision making in the NHS. British Medical Journal 2010;341:c5146.

23. Say R, Robson S, Thomson R. Helping pregnant women make better decisions: a systematic review of the benefits of patient decision aids in obstetrics. British Medical Journal Open 2011;1:e000261.
24. Angood PB, Armstrong EM, Ashton D, et al. Blueprint for action: steps toward a high-quality, high-value maternity care system. Women's Health Issues 2010;20:S18-49.
25. Entwistle VA, Watt IS. Patient involvement in treatment decision-making: the case for a broader conceptual framework. Patient Education and Counseling 2006;63:268-78.
26. Hodnett ED. Pain and women's satisfaction with the experience of childbirth: a systematic review. American Journal of Obstetrics & Gynecology 2002;186:S160-72.
27. Hendrix M, Pavlova M, Nieuwenhuijze M, Severens JL, Nijhuis JG. Differences in preferences for obstetric care between nulliparae and their partners in the Netherlands: a discrete-choice experiment. Journal of Psychosomatic Obstetrics & Gynecology 2010;31:243-51.
28. Seefat-van Teeffelen A, Nieuwenhuijze M, Korstjens I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-27.
29. DeClercq ER, Sakala C, Corry MP, Applebaum S. Listening to mothers II: report of the second national U.S. survey of women's childbearing experiences. New York: Childbirth Connection; 2006.
30. Epstein RM, Alper BS, Quill TE. Communicating evidence for participatory decision making. Journal of the American Medical Association 2004;291:2359-66.
31. Lavender T, Walkinshaw SA, Walton I. A prospective study of women's views of factors contributing to a positive birth experience. Midwifery 1999;15:40-6.
32. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.
33. Parratt J, Fahy K. Trusting enough, to be out of control: a pilot study of women's sense of self during childbirth. Australian Journal of Midwifery 2003;16:15-22.
34. Kukla R, Kuppermann M, Little M, et al. Finding autonomy in birth. Bioethics 2009;23:1-8.
35. Nieuwenhuijze MJ, Korstjens I, de Jonge A, de Vries R, Lagro-Janssen T. On speaking terms: a Delphi study on shared decision-making in maternity care. Submitted.
36. Noseworthy D, Phibbs S, Benn C. Towards a relational model of decision-making in midwifery care. Midwifery 2013;29:e42-8.
37. DeClercq ER, Sakala C, Corry MP, Applebaum S, Hemlich A. Listening to mothers III: pregnancy and birth. New York: Childbirth Connection; 2013.
38. Cunningham FG, Bangdiwala SI, Brown SS, et al. National institutes of health consensus development conference statement: vaginal birth after cesarean: new insights. Obstetrics & Gynecology 2010;115:1279-95.
39. Nieuwenhuijze MJ, de Jonge A, Korstjens I, Budé L, Lagro-Janssen T. Influence on birthing positions affects women's sense of control in second stage of labour. Midwifery 2013;29:e107-14.
40. Supporting healthy and normal physiologic childbirth: a consensus statement by ACNM, MANA, and NACPM, 2012. Available from: http://www.midwife.org/acnm/files/cclibraryfiles/filename/000000002179/physioloigical%-20birth%20consensus%20statement-%20final%20may%2018%202012%20final.pdf. Accessed August 2013.
41. Gupta JK, Hofmeyr GJ, Shehmar M. Position in the second stage of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews 2012, Issue 5. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub3.
42. Nieuwenhuijze MJ, Kane Low L, Korstjens I, Lagro-Janssen T. The role of maternity care providers in promoting shared decision-making regarding birthing positions during second stage labor. Journal of Midwifery and Women's Health 2014. In press.

8

General discussion

It is now one year after Anna Berg's second child was born. She still remembers almost every detail of the birth and feels good about her experience. During the pregnancy, Anna, her partner and the midwife made a birth plan and discussed the different options for pain relief, birthing positions and progress of birth. Anna expressed that she felt strongly about giving birth in an upright position. Her midwife assured her that she would support her and bring the birthing chair with her. She also explained that some things might go differently during birth and that it might be necessary to adjust the plan. But she would always explain why she would do something and ask Anna's permission. The midwife made sure that the other midwives in the practice knew about Anna's plan.

Once labour started, Anna walked around and used the shower to deal with the pain. Just before she felt the urge to push, the heart rate of the baby dropped. The midwife asked her to turn to the hands and knees position, explaining what was going on, remembering her that they talked about unexpected events in birth. And although Anna did not like the position, she understood why it was important and was willing to adapt. After two contractions the baby's heart rate was fine and she could sit up again to push the baby out in the next contraction. The baby was great and stayed on her chest for hours after the birth.

The general aim of this thesis was to gain insight into women's needs and desires for participation in decision-making in maternity care and translate these insights in a way that allows maternity care professionals to facilitate shared decision-making in the dynamic context of childbirth.

First, we explored women's views on psychosocial support from midwives during their transition to motherhood (chapter 2). Subsequently, using birthing positions during second stage of labour as an example of choice (chapter 3, 4 and 5), we investigated women's preferences in birthing positions, with a specific focus on women who preferred other than supine birthing positions. We examined whether choices in birthing positions contributed to women's sense of control during birth and we explored the communication between maternity care professionals and women during decision-making regarding birthing positions. The last part of this thesis focused on how the model of shared decision-making can facilitate the way women and professionals make choices in everyday practice. Using a panel of experts, we sought consensus on: 1) ingredients of quality criteria for shared decision-making in different situations during pregnancy and birth and 2) the professional competencies required to facilitate shared decision-making in maternity care (chapter 6). Additionally, we reflected on the value of shared decision-making for addressing the on-going and complex debate about 'appropriate' place of birth - home or hospital (chapter 7).

In this concluding chapter, we present an overview of the main findings of this thesis, discuss these findings, consider the methodological limitations and strengths of our research, address the implications of our findings for maternity care practice and offer suggestions for further research.

Main findings

Pregnant women's views on psychosocial support from midwives

In focus group interviews, pregnant women in Dutch midwifery practices said they want to take responsibility for their own well-being and desired to make their own choices (chapter 2). In order to do this, women want professional psychosocial support from their midwives, who are able to oversee the whole transition period and who can help them with the interpretation and shifting of information. Furthermore, women expect a proactive approach from their midwives, who should genuinely listen and help strengthen women's self-confidence.

Choice in birthing positions during second stage of labour

Women in Dutch midwifery practices, who preferred other than supine positions, were less likely to use their preferred positions than women preferring supine positions (chapter 3). A questionnaire survey showed that factors associated with using preferred positions among women with a preference for other than supine positions were higher levels of education, duration of second stage longer than 60 minutes and a strong preference. Women felt more in control during birth if they experienced an influence on birthing positions by themselves or together with others (chapter 4). For women preferring other than supine positions influence on birthing positions in combination with others had a greater effect on their sense of control than having an influence on their birthing positions just by themselves. Women seemed to benefit from sharing the influence on birthing positions with their midwives.

Qualitative data from the USA showed that there was no linear process or single approach for enabling women's decision-making with regard to birthing positions during second stage of labour was (chapter 5). Facilitating women's choices was dynamic and required a variety of styles from care professionals. Theses styles moved between an open, informative approach and a more closed, directive approach depending on the needs of the woman and clinical assessments. We also noticed that once the care professional started working with the woman, e.g. when the woman had specific ideas about the use of certain birthing positions, the woman also actively worked with the care professional. Shared decision-making was thus enacted by using varied behaviours and different communication patterns including *listening to women's* verbal and non-verbal signs, giving *encouragement*, employing *empathy*, sharing *information*, *offering choices* and being *interactive*.

On speaking terms: shared decision-making in maternity care

In a Delphi study, an international and multidisciplinary panel of experts in shared decision-making and maternity care saw shared decision-making as a dynamic process that starts in antenatal care and ends after birth when important decisions made earlier are revisited and discussed (chapter 6). Experts agreed that the regular visits during

pregnancy offer opportunities to build a relationship, anticipate situations that may occur and revisit complex issues. Open and respectful communication between women and care professionals is essential; information needs to be accurate, evidence-based and understandable to women; professional support should prepare women, beginning in the antenatal period, for unexpected and urgent decisions. The experts saw establishing a relationship with the woman as an important professional competency for shared decision-making.

Experts were divided about the contribution of professional advice in shared decision-making and about the partner's role. They agreed that care professionals can put forward their viewpoints based on evidence, but did not find consensus on putting forward viewpoints based on professional or personal experience. They also agreed that the partner should be involved when giving information and deliberating the options, but did not find consensus on the involvement of the partner in the final decision.

Last, we reflected on the on-going debate about 'appropriate' place of birth - home or hospital. We argued that the model of shared decision-making can help to address complex discussions about where to give birth in the everyday encounter between the care professional and the woman. The interactive exchange of professional information and personal information (the background of the woman's preferences) allows a process that imparts knowledge and increases support while the woman and her partner make choices. Through the use of shared decision-making, there is an opportunity to enter into a discussion that maintains the integrity of all of the individuals involved.

Reflection on the findings

The main findings of this thesis indicate that shared decision-making - as a process of mutual understanding and seeking agreed decisions between women and their care professionals - has added value for enabling women to be actively involved in their care during pregnancy and birth. This active involvement by women contributes to a positive birth experience and an optimal outcome of childbirth.

Our findings are particularly important for gaining a deeper understanding of two themes: the conditions that promote (and hinder) choice in maternity care and the challenges that accompany the use of shared decision-making in maternity care. This reflection focuses on the key-elements that are significant for choice and shared decision-making in maternity care.

In the past decades, the focus of patients' involvement in health care has moved from informed consent – obtaining permission from a patient for a medical procedure after achieving an understanding of the relevant medical facts and the risks involved -, to informed choice - decisions about a medical procedure are made by the patient alone (or

with family or friends) after a professional has given full disclosure of information about options, benefits and harms by the professional -, to shared decision-making [1]. Part of a process of shared decision-making in maternity care is making women aware of choices and making those choices accessible for them [2].

Choice in maternity care

Women in our focus group study said that they wanted to take responsibility for their own well-being and make their own choices. Nowadays, self-responsibility is greatly emphasized and expected of individuals, also with regard to their health and well-being. In the Netherlands, a recent report of the Raad voor de Volksgezondheid en Zorg [Council for Public Health and Health Care] underlines this responsibility and promotes patients' self-management and participation in health care [3]. Choice is considered to be fundamental to responsible personhood [4]. Therefore, choice and women's involvement in decision-making should be a self-evident part of maternity care. However, making this a reality in everyday practice is complex.

There are several aspects to consider when stimulating women's involvement in decision-making in maternity care.

Decisions may be necessary because of risks factors or complications that occur during the course of pregnancy or birth. Often, several options are considered, including the option of 'watchful waiting'. However, the perinatal period also includes decision-making in the absence of a problem [5,6]. These choices are based on personal preferences, such as: using prenatal screening, choosing place of birth (for healthy women with uncomplicated pregnancy), or a choice in birthing positions. Women should be able to participate in the decision-making of both types of decisions [3,7].

Although robust research findings on effects of involvement in decision-making are still scarce, a number of systematic literature reviews indicate that patient involvement had positive effects on quality of care, satisfaction (for both users and medical staff), and self-esteem of patients [8-10]. Several studies also found that having choices and influence on decisions in maternity care contributes to women's sense of control, which has positive effects on their well-being, health and satisfaction with care [11-18]. However, there is also another side to women's participation in decision-making: women may feel abandoned when they perceive that they are left alone with complicated information and decisions [19-21].

Participation in decision-making requires that women have genuine choices. This was also mentioned by several women in our focus group study: they expected to be offered different options and that they would be respected in the choice they made. However, the existence of more than one option does not necessarily imply genuine choice [22]. Other concerns are the implications of the choices (harms and benefits), as well as the circumstances and the autonomy of the person making the choice.

In our example of birthing positions, scientific evidence does not indicate that one position is better than another [23,24], implying that women's personal preference can be an important determinant in choosing birthing positions.

Still, scientific evidence is not enough to make choice in birthing positions - or any other choice - a reality. Proper equipment and professional expertise must be available in order to have a choice between options.

Additionally, pregnant women must also perceive that they have a choice, both on a service level and in the encounter with their care professionals. Van Teijlingen, in his study "What is, must still be best", suggested that preferences in maternity services are persistently affected by what women believe to be possible [25]. Women need information to learn about their options. They often rely on care professionals for understandable and correct information about the different options [26]. Professionals' attitudes and openness to women making choices are also significant for women's perception of genuine choice. Women must feel invited to participate in decision-making and in making their own choices [1,4,27,28]. In a qualitative study on birthing positions [29], women indicated that the midwife's attitude and advice on birthing positions were by far the most important factors influencing choice.

Finally, women also depend on professionals for actually putting their choice into practice, specifically in situations like birth. They turn to care professionals for support to create the conditions to achieve their choice. We found that preferred birthing positions were not always equally accessible for all women. Lower education levels, wanting less common positions and hospital birth, made it less likely that women actually used their preferences. For genuine choice, it is crucial that care professionals are open to women's active participation in care and are willing and skilled to meet women's preferences and desires.

Choice and decision-making will only be realized if women receive adequate information about their options. To promote choice, women must receive information about the available options (including the likelihood of harms and benefits), striving for full disclosure of information and truth telling by the care professional [1]. We found that women expressed the importance of information and awareness of their options to prepare physically and mentally for birth, to deal with the uncertainties of this period and to gain self-confidence. Furthermore, attending antenatal classes influenced women's knowledge of birthing positions and contributed to their sense of control. However, giving unbiased and accessible information in decision-making situations is a challenge for care professionals. When they believe one option is better than the others, care professionals can frame the information given to the woman in a particular way in order to obtain their preferred choice [30]. In a recent study in the USA a substantial number of women reported that they received one-sided information about their options in care, such as vaginal birth after a previous caesarean section [31]. Additionally, full disclosure often comes with an overload of

information. Not all women can handle extensive information. This is particularly true in stressful situations that make it difficult to weigh relevant information and during birth when there may not be enough time for extensive sharing of information and consideration of harms and benefits.

Decision support technologies, such as decision aids, may help to give women more objective and understandable information. Decision aids in maternity care are associated with a number of positive effects including reduced anxiety, lower decisional conflict, improved knowledge, improved satisfaction and increased perception of having made an informed choice [32-34]. However, well-documented decision aids are available only for a limited number of topics in maternity care [32-34], such as: prenatal testing, vaginal birth after caesarean section, external cephalic version and labour analgesia. The current evidence base for effectiveness of decision aids is limited by various aspects [35]. More research is needed on the use of decision aids in lower literacy and numeracy populations. Additionally, little is known about its effect on patient–practitioner communication. Although, some studies reported positive effects on patient-practitioner communication [35], other authors are concerned about the potential negative influence that decision aids may have on the relational aspects of the decision-making process [36]. Decision aids should not be seen as an alternative to the care professional in the decision-making process, but the decision aid may enhance the care provided by the professional as a tool to convey information and an adjunct to good clinical practice [35]. As such, decision aids are one aspect of a process of shared decision-making between patients and care professionals.

To achieve women's desire for self-responsibility and having genuine choices, and to help avoid women's feelings of abandonment, women's role in decision-making and information about choices should be embedded in a process of shared decision-making.

Shared decision-making in maternity care

This thesis underscores the fact that women value their midwives' support in decision-making, seeing them as professionals who can oversee the whole perinatal period. Women expected their midwife to take a proactive approach in providing them with information and exploring their preferences. Women's sense of control benefited from sharing the influence on use of birthing positions during birth with their midwives, especially when they preferred non-supine positions. Choice and decision-making in maternity care often takes place in interaction between women and professionals. While it is out-dated to think that professionals can make decisions without the woman having a say in it, women prefer to make decisions in conversation with their care professional [19,20,37-39]. Women value the support of their care professional in stressful situations or when there is an overload of (contradictory) information [38].

However, women's participation in decision-making during the perinatal period imposes demands on women and care professionals. Shared decision-making offers a

model for approaching decision-making in the interaction between women and their care professionals, but certain aspects need further consideration when applying this model in a dynamics event like pregnancy and birth.

A broader conceptualization of shared decision-making emphasizes the importance of a positive relationship between care professional and patient, where, beyond the exchange of factual information, patients feel cared for, are able to develop a positive sense of involvement and are enabled to consider their 'best' option, taking into consideration individual circumstances from outside the clinical context [40-42]. This fits well with the meaning and impact childbirth has for women and their families [43].

Several studies suggest that the relational aspect is particularly important for decision-making by women. When facing choices around pregnancy and birth, women tend to use relational ways of information gathering, discussion and decision-making [4]. This tendency was also noted in a study on women's approaches to moral dilemmas and decisions, such as abortion [44]. Research on the woman-midwife dyad found that decision-making is relational by nature, influenced by social networks and the social, political, economic and historical context in which they are embedded [38]. It highlighted the importance of the relationship between midwives and women, in particular when decision-making was influenced by unplanned events during their birth. In these circumstances women's decision-making was affected by their vulnerability, which necessitated a trust in their midwife. This trust can develop when women feel they are listened to and taken seriously in their desires and needs. We found that when a woman had specific ideas about the use of certain birthing positions, and the care professional started working with her, the woman also actively worked with the professional. This implies that the woman experienced a trustable professional who listened to her and took her seriously. Similarly, the Delphi study in this thesis identified "building a relationship with the woman" as an important professional competency for shared decision-making. The regular visits during pregnancy offer unique opportunities to build a relationship, anticipate situations that may occur and revisit complex issues.

Central to shared decision-making is the deliberation between women and care professionals about the available options. Deliberation in shared decision-making is more than the exchange of specialised information from the care professional and value information from the woman. Women's knowledge on health and professionals' values are also essential sources for a fruitful mutual process of information exchange in coming to a decision [45].

Shared decision-making as a relational process involves an interactive, two-way exchange of professional information (options, benefits, harms, uncertainties and experiences) and personal information (circumstances and issues important to quality of life) [46]. Both parties can deliberate based on the disclosure of values and preferences

regarding the particular situation, building towards a consensus-based decision based on joint responsibility. Our Delphi study showed that experts seem concerned to exert too much influence on women's choices by giving other than evidence-based information. They see professionals' primary role as supporting women to make their own choices. However, patients value care professionals' expertise and input, when presented in an unthreatening way [7,19,20,47]. Through this process, there is an opportunity to enter into a discussion that preserves the integrity of all individuals involved. Limitations in time can be a serious barrier to achieve full exchange of information [48]. Additionally, care professionals need to be aware of the imbalance in power and the asymmetry in information that can affect the communication [27,28,49].

Deliberation may also be influenced by ideas professionals have about women's capability to be involved in decision-making [48]. In this thesis women were less able to use their preferred non-supine birthing positions if they had lower educational levels. Stereotyping may be an underlying factor, where professionals assume that less educated women find it less important to be involved in decision-making [50,51] However, women with less education do want to influence decisions and discuss the options with maternity care professionals [50,52].

On the other hand not every woman will feel the need or will have the skills to fully participate in the deliberation. This may also vary between the kinds of decisions that need to be made. Given the variety of events that occur in pregnancy and childbirth and an overwhelming amount of information, women often ask care professionals for advice. Care professionals need to be able to gauge the woman's preferred level of involvement and then employ skills and competencies to achieve that level of involvement [53]. Research from other medical fields suggested beneficial results from training patients in the communication with their doctor [54-56].

Additionally, stressful situations and/or birth itself make extensive deliberation difficult, if not impossible. Professionals need to balance between different approaches. In some circumstances, e.g. choices around prenatal screening, the emphasis is on supporting women to make their own choice, while on other occasions, e.g. in emergencies, a more directive approach – based on earlier discussions – may be necessary.

Shared decision-making recognizes the self-determination of the patient and aims at respecting patient's autonomy to make choices. Experts in the Delphi study agreed almost unanimously on respect for women's autonomy as an ingredient for quality criteria for shared decision-making in maternity care. Autonomy is one of the basic ethical principles in health care: "Autonomous decisions are those made intentionally and with substantial understanding and freedom from controlling influences" [57]. This, however, may not always be attainable in maternity care. Autonomy is difficult to sustain when women are vulnerable, not well, or from a cultural or social context which does not support autonomy [38]. Autonomous decision-making is also challenged in situations during

pregnancy and birth when unexpected, urgent decisions must be made or when the impact of the decision affects the health of the woman and the baby differently.

Entwistle expressed her concerns about an understanding of autonomy that puts more emphasis on offering and allowing choice than on enabling informed decision-making [58]. If professionals are more focused on allowing choice than enabling patients to make informed choices, the principle may fail to protect those who struggle with choices in health care options. These patients may feel abandoned rather than autonomous [18,59].

Autonomy in maternity care cannot be considered separate from the contextual situation of the woman, her social network and the interaction with her care professional. In her work on "care ethics", Verkerk describes this as "relational autonomy": the way people realise their autonomy is seen as embedded in their social context and the relations they have with others. Additional, she emphasizes the importance of a caring relationship between care professional and care receiver where the professional has a genuine sensitivity and attentiveness to the woman's needs and desires, that balances the dangers of interfering with a woman's choice against the dangers of abandonment [60,61]. The care professional respects the woman in her particularity, with her own needs, desires and opportunities, with her own history and her own view on life. From this perspective, the woman, her partner, significant others and the care professional face the choices and decisions together. The decision-making process is situational-tailored to the needs, circumstances and capacities of the woman. Professionals need to offer women space for active involvement in decision-making as well as enable women to achieve this in their unique circumstances. Care ethics is particularly relevant when considering care concerning pregnancy and birth because it articulates the moral values of nurturing, relationship and continued connection. These are values that are significant for the caring relationship women and men need to develop with their child as part of the transition to parenthood.

Highlighting involvement in care and relational accounts of autonomy allows women to have the final say in the decisions concerning their care; they need to be recognized as responsible adults at the start of a lifelong relationship with their child. However, women's autonomy may be under pressure in the rare event that women want something that implicates more risk for their baby. Using a process where decisions are shared gives the opportunity for women and care professionals to adopt a process of increased joint knowledge and support for women. The quality criteria for shared decision-making can support care professionals in preserving open communication in which they can question their own perception of the evidence, explore women's underlying barriers and seek alternative options together with the women. Keeping in mind that aiming for optimal outcomes in maternity care, it is very disagreeable that a mother and her baby are dichotomized by forcing a choice in what is best for one above the other. If no solution can be found, a dilemma is faced where no one-fits-all answer is available.

Shared decision-making in maternity care places a high demand on professional skills and competences. As this thesis showed, these competencies go beyond being able to present options and the evidence on harms and benefits. Shared decision-making in maternity care is enacted by using varied behaviour and communication patterns including listening to women's verbal and non-verbal signs, giving encouragement, employing empathy, sharing information, offering choices and being interactive, in short laying the basis for building a "trusting woman-professional relationship". Future maternity care professionals need to be exposed to and learn about shared decision-making from the first day of their education. For educators, the challenge is to make it an integrated part not only of health education programmes, but also in their personal attitude towards students.

This thesis contributes to the knowledge on shared decision-making in health situations where time is limited or acute decisions need to be made. Studies on this topic are still scarce within and outside maternity care [62]. We identified aspects with specific relevance for shared decision-making when decisions are made outside the consultation room, including situations where urgent decision-making must be made. Full shared decision-making is not always possible in these situations. However, briefly explaining what is happening and discussing the decisions again after the event will enhance patients' feelings of involvement [13,63,64]. Moreover, if urgent situations can be anticipated health professionals can support their patients through building a relationship and discussing possible situations beforehand in general terms.

Limitations and strengths

As is true in most research the social and cultural location of the participants in our studies place certain limitations on the generalizability of our findings. Cultural and social backgrounds have an influence on choice, decision-making and women's involvement in care [65,66]. In most studies of this thesis, women of ethnic minorities and women with lower levels of education were under represented and in the Delphi study the experts were all from high-income countries. These facts should be considered when applying the results to women and maternity care professionals from other cultural or social backgrounds. Differing ways of organizing maternity care also will influence attitudes and approaches to decision making. This problem is somewhat mitigated here as our data come from two countries with widely different maternity care systems – the Netherlands and the United States – allowing us to consider this variation.

Another limitation is the different sources of possible bias. In the survey on birthing positions, midwifery practices and women participating in the studies were self-selected. Most likely, positive attitudes towards diversity in birthing positions played a part in the

willingness to participate. Additionally, women filled out the questionnaire about women's preferences after they gave birth and this may have led to avoidance of post decision dissonance [67]; women may have responded in line with the final outcome.

There are potential pitfalls that influence the outcomes of the Delphi method. Boulkedid confirms that a Delphi is appropriate for identifying quality criteria for health care and we applied their recommendations for planning, using, and reporting the Delhi procedure [68]. We took great care in drawing up a panel from various disciplines and backgrounds, but the panel included relatively many female participants, midwives, and Dutch participants. These skewed demographics of the participating experts might be a source of bias. Therefore, the critical cut-off level before accepting consensus, guaranteed that if only a few experts disagreed with a statement, it would not be accepted. Additionally, the load put on experts in a Delphi is substantial and the time and effort involved in participating in a Delphi study is easily underestimated. Although, we followed up on the experts throughout the process, a number of experts did not complete all three rounds, but the drop-out rate is comparable with other Delphi studies [69-71].

In our studies, we wanted to capture the voice of women and listen to their desires and needs for choice, involvement in care and shared decision-making. However, in our Delphi study only a small number of women participated, and women were not involved in the design of the studies in this thesis.

In this thesis, we used a variety of research methods to study different aspects of the decision-making process in maternity care. Mixed methods research, according to Johnson is "the type of research that combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and corroboration" [72]. Combining quantitative and qualitative approaches in combination may provide a more comprehensive understanding of a complex phenomenon than use of either approach exclusively, incorporating the strengths of both methodologies and reducing some of the problems associated with a single method [73].

This thesis focused on the decision-making process of healthy women in maternity care, gaining an understanding of how decision-making during pregnancy and birth works for pregnant and birthing women without serious illness or complications. We conducted our research in different maternity care settings; the Netherlands with its clearly defined low-risk population in primary care and a hospital setting in the USA with women being attended by midwives and physicians. The experts in our Delphi setting came from different disciplines, settings and backgrounds, offering an international perspective on what criteria can be used to assess the quality of shared decision-making.

Studying audiotaped recordings made during the second stage of labour in the USA gave a unique opportunity to listen to what was happening around choice in birthing positions in the reality of practice. This offered us the possibility to gain a deeper understanding on how choice works during birth.

Recommendations for practice

Based on the findings of this thesis, several recommendations can be made for everyday practice, the care system and education.

In everyday practice, potential choices (e.g. on place of birth) need to be explored early enough during pregnancy to give women sufficient time to process the information and consider their options. Maternity care professionals need to make women aware of choices and options. They proactively and openly discuss women's expectations, preferences, and the role women want to play in decision-making. This does not imply that women must make definite decisions for all their choices during their pregnancy; women should feel the freedom to revisit their choices and change their decisions. During antenatal care, maternity care professionals should also discuss the possible need for urgent decisions during, exploring together with women what their attitudes towards care are and how to communicate in these circumstances. A birth plan can be a helpful tool to facilitate these explorations. After birth, women's experiences of childbirth need to be evaluated. This should include revisiting and explaining why urgent decisions were made.

Genuine choices need to be available for women in maternity care, for example with regard to place of birth. To achieve optimal care, the maternity care system needs initiatives like "dappere dokters" [courageous physicians] [74]: care professionals who discuss with a woman what is and is not needed for optimal care and what are wise and unwise decisions given the circumstances. This type of professionals will pay close attention to the involvement and responsibility of women when making decisions about care and is also willing to reflect on their own functioning, including what is the basis for their decisions. Are their decisions the result of: lack of time, strictly following guidelines without looking at women's individual circumstances, lack of knowledge, lack of support in their local work environment? Multidisciplinary guidelines – like the "Verloskundige Indicatielijst" [Obstetric Manual] are needed to support care professionals in keeping up-to-date on the evidence and inform the public on recommendations for evidence-based care. To make information and choice more accessible for women, it is necessary to produce more decision aids that are structured to give an overview of the evidence and are based on recommendations for adequate communications of risks. These aids must enhance, rather than close down, deliberation between women and care professionals.

Education programmes for maternity care professionals need to integrate shared decision-making in their curricula as a part of the professional attitude, making students aware of the importance of shared decision-making and offering them opportunities to practice their skills in simulation and real life situations. Education for shared decision-making should be a part of interprofessional education. Here professionals and students from different professional backgrounds can learn and work in partnership, break down barriers that inhibit best practice and develop a shared 'language' and 'approach' to care.

Additionally, training in shared decision-making for women themselves needs to be considered, for example as part of antenatal classes. Developing women's skills for adequate women-professional communication is not only an investment for their present pregnancy, but can also support them in future encounters with health professionals outside maternity care.

Recommendations for further research

This thesis is a step forward towards full understanding and use of shared decision-making in maternity care, but more research is needed.

It is critical, that a larger group of women validate the quality criteria for shared decision-making from the Delphi study. Development and evaluation of women-tailored interventions are needed, adaptable to different characteristics of women and types of decisions. These interventions should enable women to participate in elaboration about choices and make decisions that reflect their values, needs and circumstances, without increasing their anxiety or fear of childbirth.

Additionally, studies should identify factors that promote and hinder the implementation of shared decision-making among professionals in maternity care. Research is needed to develop and test implementation strategies that support professionals in the application of shared decision-making, including aspects as cost-effectiveness. To improve shared decision-making in maternity care, current and future care professionals need to be educated on how to adopt shared decision-making. They need to gain competence in applying shared decision-making in their everyday work. This requires developing teaching methods and programmes for educators to incorporate shared decision-making in existing curricula. A pilot study for the development of an education programme for the Bachelor of Midwifery in Maastricht showed promising results [75].

Flexible use of different birthing positions promotes normality of birth. Women can increase progress of labour, promote optimal health outcomes for themselves and their babies through using a variety of birthing positions during labour and birth. Further research is needed on how to promote the use of different birthing positions in home and hospital settings as part of developing strategies to promote normality of birth.

Promoting women's involvement in health care also has implications for women's involvement in research on health care delivery and services. Future research into shared decision-making in maternity care should include women as partners in research.

Conclusion

Shared decision-making - a process of seeking mutual understanding and agreed decisions between women and their maternity care professionals - is important for enabling women to be actively involved in their care and enhance their sense of control during childbirth.

Professionals can facilitate this throughout the perinatal period by using a proactive, open and respectful approach in exploring women's desires, needs and experiences, creating circumstances that give women the opportunity for involvement in decision-making and building a relationship that enhances women's trust and self-esteem.

Shared decision-making is part of a whole package of listening to women in maternity care, putting women and their babies in the heart of care and enhancing a woman-centred approach.

References

1. Cooke P. Helping women to make their own decisions. In: Raynor MD, Marshall JE, Sullivan A, editors. Decision making in midwifery practice. Edinburgh: Elsevier; 2005.
2. Elwyn G, Frosch D, Thomson R, et al. Shared decision making: a model for clinical practice. Journal of General Internal Medicine 2012;27:1361-7.
3. Raad van de Volksgezondheid en Zorg [Council for Public Health and Health Care]. De participerende patient [The participating patient]. Den Haag: RVZ; 2013.
4. Edwards NP. Why can't women just say no? And does it really matter? In: Kirkham M, editor. Informed choice in maternity care. Basingstoke: Palgrave Macmillan; 2004.
5. Raynor MD, Bluff R. Introduction. In: Raynor MD, Marshall JE, Sullivan A, editors. Decision making in midwifery practice. Edinburgh: Elsevier; 2005.
6. Edwards A, Elwyn G. Evidence-based patient choice. Inevitable of impossible? Oxford: Oxford University Press, 2002.
7. Edwards A, Elwyn G. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
8. Crawford MJ, Rutter D, Manley C, et al. Systematic review of involving patients in the planning and development of health care. British Medical Journal 2002 30;325:1263.
9. Mockford C, Staniszewska S, Griffiths F, Herron-Marx S. The impact of patient and public involvement on UK NHS health care: a systematic review. International Journal for Quality in Health Care 2012;24:28-38.
10. Fotaki M, Roland M, Boyd A, McDonald R, Scheaff R, Smith L. What benefits will choice bring to patients? Literature review and assessment of implications. Journal of Health Services Research & Policy 2008;13:178-84.
11. Bluff R, Holloway I. 'They know best': women's perceptions of midwifery care during labour and childbirth. Midwifery 1994;10:157-64.
12. Waldenström U. Experience of labor and birth in 1111 women. Journal of Psychosomatic Research 1999;47:471-82.
13. Green JM, Baston HA. Feeling in control during labor: concepts, correlates, and consequences. Birth 2003;30:235-47.
14. Goodman P, Mackey MC, Tavakoli AS. Factors related to childbirth satisfaction. Journal of Advanced Nursing 2004;46:212-9.
15. Oweis A. Jordanian mother's report of their childbirth experience: findings from a questionnaire survey. International Journal of Nursing Practice 2009;15:525-33.
16. Ford E, Ayers S, Wright DB. Measurement of maternal perceptions of support and control in birth (SCIB). Journal of Women's Health 2009;18:245-52.
17. Larkin P, Begley CM, Devane D. Women's experiences of labour and birth: an evolutionary concept analysis. Midwifery 2009;25:e49-59.
18. Meyer S. Control in childbirth: a concept analysis and synthesis. Journal of Advanced Nursing 2013;69:218-28.
19. Kukla R, Kuppermann M, Little M, et al. Finding autonomy in birth. Bioethics 2009;23:1-8.
20. Hertig SG, Cavalli S, Burton-Jeangros C, Elger BS. 'Doctor, what would you do in my position?' Health professionals and the decision-making process in pregnancy monitoring. Journal of Medical Ethics 2013.
21. Epstein RM, Gramling RE. What is shared in shared decision making? Complex decisions when the evidence is unclear. Medical Care Research and Review 2013;70:94S-112S.
22. Jung PG. Autonomy and Genuine choice. International Proceedings of Economics Development & Research 2012;54:154-6.
23. Gupta JK, Hofmeyr GJ, Shehmar M. Position in the second stage of labour for women without epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2012, Issue 5. Art. No.: CD002006. DOI: 10.1002/14651858.CD002006.pub3.
24. Kemp E, Kingswood CJ, Kibuka M, Thornton JG. Position in the second stage of labour for women with epidural anaesthesia (Review). Cochrane Database of Systematic Reviews. 2013, Issue 1. Art. No.: CD008070. DOI: 10.1002/14651858.CD008070.pub2.
25. Van Teijlingen ER, Hundley V, Rennie A-M, et al. Maternity satisfaction studies and their limitations: "What is, must still be best". Birth 2003;30:75-82.
26. Plutzer K, Keirse MJ. Effect of motherhood on women's preferences for sources of health information: a prospective cohort study. Journal of Community Health 2012;37:799-803.

27. Charles C, Gafni A, Whelan T. Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model. Social Science & Medicine 1999;49:651-61
28. Guadagnoli E, Ward P. Patient participation in decision-making. Social Science & Medicine 1998;47:329-9.
29. De Jonge A, Lagro-Janssen ALM. Birthing positions. A qualitative study into the views of women about various birthing positions. Journal of Psychosomatic Obstetrics & Gynecology 2004;25:47-55.
30. Gong J, Zhang Y, Yang Z, Huang Y, Feng J, Zhang W. The framing effect in medical decision-making: a review of the literature. Psychology, Health & Medecine 2013;18:645-53.
31. DeClercq ER, Sakala C, Corry MP, Applebaum S, Hemlich A. Listening to mothers III: pregnancy and birth. New York: Childbirth Connection; 2013.
32. Vlemmix F, Warendorf J, Rosman A, et al. Decision aids to improve informed decision-making in pregnancy care: a systematic review. BJOG: An International Journal of Obstetrics & Gynaecology 2013;120:257-66.
33. Dugas M, Shorten A, Dubé E. Decision aid tools to support women's decision making in pregnancy and birth: A systematic review and meta-analysis. Social Science & Medicine 2012;74:1968-78.
34. Say R, Robson S, Thomson R. Helping pregnant women make better decisions: a systematic review of the benefits of patient decision aids in obstetrics. British Medical Journal Open 2011;1:e000261.
35. Stacey D, Bennett CL, Barry MJ, et al. Decision aids for people facing health treatment or screening decisions. Cochrane Database of Systematic Reviews 2011, Issue 10. Art. No.: CD001431. DOI: 0.1002/14651858.CD001431.pub3.
36. Charles C, Gafni A, Freeman E. Implementing shared treatment decision making and treatment decision aids: A cautionary tale. Psicooncologia 2010;7(2-3):243-255.
37. DeClercq ER, Sakala C, Corry MP, Applebaum S. Listening to mothers II. Report of the second national U.S. survey of women's childbearing experiences. New York: Childbirth Connection; 2006.
38. Noseworthy DA. Decision-making in the woman-midwife dyad: a relational undertaking (PhD thesis). Manawatū: Massey University; 2013.
39. Noseworthy D, Phibbs S, Benn C. Towards a relational model of decision-making in midwifery care. Midwifery 2013;29:e42-8.
40. Freeman LM, Timperley H, Adair V. Partnership in midwifery care in New Zealand. Midwifery 2004;20:2-14.
41. Entwistle VA, Watt IS. Patient involvement in treatment decision-making: The case for a broader conceptual framework. Patient Education and Counseling 2006;63:268-78.
42. Entwistle V. Patient involvement in decision-making: The importance of a broad conceptualization. In: Edwards A, Elwyn G, editors. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
43. De Vries RG. A pleasing birth: midwifery and maternity care in the Netherlands. Philadelphia: Temple University Press; 2005.
44. Gilligan C. In a different voice. Psychological theary and women's development. Cambridge MA: Harvard University Press; 1993.
45. Kasper J, Légaré F, Scheibler F, Geiger F. Turning signals into meaning – 'shared decision making' meets communication theory. Health Expectations 2011;15:3-11.
46. Charles C, Whelan T, Gafni A. What do we mean by partnership in making decisions about treatment? British Medical Journal 1999;319:780-2.
47. Charles C, Gafni A, Whelan T. Shared decision-making in the medical encounter: what does it mean? (or it takes at least two to tango). Social Science & Medicine 1997;44:681-92.
48. Légaré F, Ratté S, Gravel K, Graham ID. Barriers and facilitators to implementing shared decision-making in clinical practice: update of a systematic review of health professionals' perceptions. Patient Education and Counseling 2008;73:526-35.
49. Holm S, Davies M. Ethical issues around evidence-based choice and shared decision-making. In: Edwards A, Elwyn G, editors. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
50. Green JM, Kitzinger JV, Coupland VA. Stereotypes of childbearing women: a look at some evidence. Midwifery 1990;6:125-32.
51. Stapleton H. Is there a difference between a free gift and a planned purchase? The use of evidence-based leaflets in maternity care. In: Kirkham M, editor. Informed choice in maternity care. Basingstoke: Palgrave Macmillan; 2004.

52. Ebert L, Bellchambers H, Ferguson A, Browne J. Socially disadvantaged women's views of barriers to feeling safe to engage in decision-making in maternity care. Women and Birth 2013.
53. Stacey D, Légaré F, Kryworuchko J. Evidence-based health care decision-making: Role for health professionals. In: Edwards A, Elwyn G, editors. Shared decision-making in health care. Oxford: Oxford University Press; 2009.
54. Harrington J, Noble LM, Newman SP. Improving patients' communication with doctors: a systematic review of intervention studies. Patient Education and Counseling 2004;52:7-16.
55. Cegala DJ. Emerging trends and future directions in patient communication skills training. Health Communication 2006;20:123-9.
56. Arnold CL, Coran JJ, Hagen MG. Revisiting patient communication training: an updated needs assessment and the AGENDA model. Patient Education and Counseling 2012;88:399-405.
57. Beauchamp TL, Childress JF. Principles of biomedical ethics. Seventh edition. Oxford: Oxford University Press; 2013.
58. Entwistle VA, Carter SM, Cribb A, McCaffery K. Supporting patient autonomy: the importance of clinician-patient relationships. Journal of General Internal Medicine 2010;25:741-5.
59. Bosk CL. All God's mistakes. Genetic counseling in a pediatric hospital. Chicago: the university of Chicago Press; 1992.
60. Verkerk M. Care ethics as a feminist perspective on bioethics. In: Gastmans C, Dierickx K, Nys H, Schotmans P, editors. New pathways to European ethics. Antwerp: Intersentia; 2007.
61. Verkerk M. A feminist care-ethics approach to genetics. In: Ashcroft R, Lucassen A, Parker M, Verkerk M, Widdershoven G, editors. Case analysis of clinical ethics. Cambridge, U.K.: Cambridge University Press; 2005.
62. Flynn D, Knoedler MA, Hess EP, et al. Engaging patients in health care decisions in the emergency department through shared decision-making: A systematic review. Academic Emergency Medicine 2012;19:959-67.
63. Hodnett E. Pain and women's satisfaction with the experience of childbirth: a systematic review. American Journal of Obstetrics & Gynecology 2002;186:S160-72.
64. Waldenström U, Hildingsson I, Rubertsson C, Rådestad I. A negative birth experience: prevalence and risk factors in a national sample. Birth 2004;31:17-27.
65. Suurmond J, Seeleman C. Shared decision-making in an intercultural context. Barriers in the interaction between physicians and immigrant patients. Patient Education and Counseling 2006;60:253-9.
66. Charles C, Gafni A, Whelan T, O'Brien MA. Cultural influences on the physician–patient encounter: The case of shared treatment decision-making. Patient Education and Counseling 2006;63:262-7.
67. Festinger L. A Theory of cognitive dissonance. Stanford: Stanford University Press; 1957.
68. Boulkedid R, Abdoul H, Loustau M, Sibony O, Alberti C. Using and reporting the Delphi method for selecting healthcare quality indicators: a systematic review. PLoS One 2011;6(6):e20476.
69. De Bruin-Kooistra M, Amelink-Verburg MP, Buitendijk SE, Westert GP. Finding the right indicators for assessing quality midwifery care. International Journal for Quality in Health Care 2012;24:301-10.
70. Elwyn G, O'Connor A, Stacey D, et al. Developing a quality criteria framework for patient decision aids: online international Delphi consensus process. British Medical Journal 2006;333:417.
71. Padgett K, Rhodes C, Lumb M, et al. What matters to users of services? An explorative study to promote shared decision making in health care. Health Expectations 2012. Doi: 10.1111/j.1369-7625.2012.00767.x.
72. Johnson R, Onwuegbuzie A, Turner L. Toward a definition of mixed methods research. Journal of Mixed Methods Research 2007;1:112-33.
73. Creswell JW, Plano Clark VL. Designing and conducting mixed methods research. Thousand Oaks: Sage Publications; 2011.
74. Visser J. Amsterdamse cardioloog Dappere Dokter 2013 [Cardiologist from Amsterdam Courageous Doctor 2013]. Medisch Contact 2013;48:2502.
75. Windhausen M. Exploration of appropriate education for shared decision-making in a Dutch bachelor of midwifery (Master dissertation). Maastricht/Glasgow; 2013.

Summary
Samenvatting
List of publications
Dankwoord
Curriculum Vitae

Summary

Childbirth is a major life event that affects women's physical and emotional health. In addition to a safe birth, women also benefit from a positive birth experience; both are important for the start of a healthy family life. Having a sense of control during birth has a positive influence on women's birth experience. Active involvement in care - knowing what is happening, having choices and sharing in decision-making – contributes to women's sense of control in childbirth.

In this thesis we studied women's views on choice and decision-making in maternity care – specifically around birthing positions. We also explored how the model of shared decision-making can support women and care professionals in a collaborative process of decision-making.

The general aim of the thesis is to gain insight into women's needs and desires for participation in decision-making in maternity care and translate these insights in a way that allows maternity care professionals to facilitate shared decision-making in the dynamic context of pregnancy and childbirth.

Chapter 1

General introduction

The first chapter describes the rationale, the aims and the outline of this thesis.
The concept of shared decision-making has guided the research in this thesis. Shared decision-making is defined as "Involvement of both patient and care provider, sharing of information by both parties, both parties taking steps to build consensus about the preferred treatment, and reaching agreement about which option of care to implement". In the past two decades, the use and effects of shared decision-making in medicine have been explored in a substantial number of studies. However, the findings of these studies cannot always be applied directly to maternity care. Shared decision-making in other aspects of health care assumes time, space for conversation and the opportunity to gain insights into the preferences and desires individuals may have for their care. These conditions exist during pregnancy, but in the context of labour and birth, the process of sharing information, communicating clinical findings and reaching a decision is much more challenging.

In this thesis, choice in birthing positions was used as an example for exploring women's involvement in care. Scientific evidence regarding the optimal position for second stage of birth does not indicate that one position is better than another. Therefore, women's preferences for a certain birthing position can be leading in everyday care for healthy women.

First, we explored what contributes to a positive experience and women's well-being in pregnancy and childbirth. The research question was:

1. What are the wants and needs of pregnant women with regard to psychosocial support from midwives during the transition to motherhood? (chapter 2)

As the women in this study expressed that they wanted midwives who proactively support and facilitate participation in decision-making, we further investigated this around women's choice in birthing positions with three research questions:

2. Which birthing positions do women prefer and do they actual use their preferred positions in second stage of labour? Which factors are related to using the preferred positions? (chapter 3)
3. What is the relationship between choices in birthing positions and women's sense of control during second stage of labour? (chapter 4)
4. How is the communication between women and maternity care professionals during second stage of labour around choices and decisions regarding birthing positions? (chapter 5)

These studies indicated that decision-making in practice is a shared process between women and care professionals. Subsequently, we explored how a shared process of decision-making can be facilitated in maternity care, inside and outside the consultation room. The research question was:

5. What are ingredients of quality criteria for shared decision-making in different situations during pregnancy and birth, and what professional competencies are needed for shared decision-making in maternity care? (chapter 6)

Chapter 2

Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study

This chapter presents the findings from focus group interviews with healthy, pregnant women from Dutch midwifery practices. We explored women's views on psychosocial support from midwives during their transition to motherhood. In total, 21 Dutch participants were included in three focus groups. Groups 1 (n = 7) and 3 (n = 8) consisted of pregnant women from four semi-urban midwifery practices, while group 2 (n = 6) included participants from three urban midwifery practices.

Women said that they wanted to take responsibility for their own well-being and that of their baby. In addition to informal support from relatives or friends, they explicitly expressed a need for support from their midwives when going through the transition to motherhood. They wanted informational and emotional support that addressed psychological and physical changes during pregnancy. Women, ultimately, wanted to make their own choices. To make this possible, they needed support from their midwives as they can oversee the whole period and can help them with shifting and interpreting information. Women expected a proactive approach from their midwives, who genuinely listened and helped strengthen their self-confidence.

Chapter 3

Factors influencing the fulfilment of women's preferences for birthing positions during second stage of labour

In this study we explored women's preferences with regard to birthing positions during second stage of labour, with a special focus on women who preferred positions other than the common supine positions. A self-report questionnaire survey was conducted among women in 54 Dutch midwifery practices.

Of the 1154 women in the study, 58.9% preferred supine positions, 19.6% preferred other positions (e.g. sitting or standing), and 21.5% had no distinct preference. Women who preferred supine positions gave birth in these positions more often than women with preferences for other positions. Among the women having a preference for other positions, the actual fulfilment of their preference was related to longer duration of second stage of labour, higher levels of education, a strong preference and giving birth at home. These results demonstrate differences in women's use of preferred positions during childbirth. Midwives can contribute to women-centred care by proactively exploring women's preferences for birthing positions throughout pregnancy and birth, supporting women in developing well-informed choices and facilitating these choices where possible.

Chapter 4

Influence on birthing positions affects women's sense of control in second stage of labour

This chapter presents the results from a study exploring whether choices in birthing positions contribute to women's sense of control during birth. The same data were used as in chapter 3. Multiple regression analyses were used to investigate which factors associated with choices in birthing positions affected women's sense of control during second stage of labour.

In the total group of women (n = 1030) significant predictors for sense of control were: influence on birthing positions (self or together with others), attendance of antenatal classes, feelings towards birth in pregnancy, and pain in second stage of labour. For women who preferred other than supine birthing positions (n = 204) significant predictors were: influence on birthing positions (self or together with others), feelings towards birth in pregnancy, pain in second stage of labour, and having a home birth. For these women, influence on birthing positions in combination with others had a greater effect on their sense of control than having an influence on their birthing positions just by themselves.

Women felt more in control during birth if they experienced an influence on birthing positions. For women preferring other than supine positions, home birth and shared decision-making seemed to have added value.

Chapter 5

The role of maternity care providers in promoting shared decision-making regarding birthing positions during second stage of labor

This study on birthing positions was an exploratory qualitative study based on audiotapes of second stage of labour from nulliparous women giving birth in a U.S.A. teaching hospital. The purpose of this investigation was to explore how maternity care providers communicate with women during second stage labor as they decide on birthing positions. A literature informed framework was developed to conduct a process of deductive content analysis. Literature regarding shared decision-making, sense of control, and predictors of positive birth experiences were reviewed to develop a coding framework for the analysis process. The framework included the following categories: *listening to women, encouragement, information, offering choices* and *style of support*. Forty-one audiotapes of women and their maternity care providers during second stage of labor were transcribed verbatim and analyzed.

Themes identified in the transcripts included all those in the analytic framework plus two added categories of communication: *empathy* and *interaction*. Maternity care providers in this study enabled women to select various birthing positions using a dynamic process that moved between open, informative approaches and more closed, directive approaches depending on the woman's needs and clinical condition. Women became more actively involved in shared decision-making regarding birthing positions as providers found the right balance between being responsive to the woman's questions or directive as clinical conditions unfolded.

Care providers can support a woman to use different birthing positions during second stage labor by employing a flexible style that incorporates clinical assessment and the woman's responses.

Chapter 6

On speaking terms: a Delphi study on shared decision-making in maternity care

This chapter presents the results of a study to identify quality criteria and professional competencies for shared decision-making in maternity care. The focus was on decision-making in everyday practice for low-risk women. We performed a three-round web-based Delphi study. The panel included international experts in shared decision-making and in maternity care: midwives, obstetricians, educators, researchers, policy makers and representatives of care users. Round 1 contained open-ended questions to explore relevant ingredients for shared decision-making in maternity care and to identify the competencies needed for this. In rounds 2 and 3, experts rated statements on quality criteria and competencies on a 1 to 7 Likert-scale. A priori, positive consensus was defined as 70% or more of the experts scoring ≥6 (70% panel agreement).

Consensus was reached on 45 quality criteria statements and 4 competency statements. Experts saw shared decision-making as a dynamic process that starts in

antenatal care and ends after birth when important decisions made earlier are revisited and discussed. Experts agreed that the regular visits during pregnancy offer opportunities to build a relationship, anticipate situations that may occur and revisit complex issues. Open and respectful communication between women and care professionals is essential; information needs to be accurate, evidence-based and understandable to women; professional support should prepare women, beginning in the antenatal period, for unexpected and urgent decisions. The experts saw establishing a relationship with the woman as an important professional competency for shared decision-making. Experts were divided about the contribution of professional advice in shared decision-making and about the partner's role. They agreed that care professionals can put forward their viewpoints based on evidence, but did not find consensus on putting forward viewpoints based on professional or personal experience. They also agreed that the partner should be involved when giving information and deliberating the options, but did not find consensus on the involvement of the partner in the final decision.

Shared decision-making in maternity care is a dynamic process that takes into consideration women's individual needs and the context of the pregnancy or birth. The identified ingredients for good quality shared decision-making can help practitioners to apply shared decision-making in practice and educators to prepare (future) professionals for shared decision-making, contributing to women's positive birth experience and satisfaction with care.

Chapter 7

Facilitating women's choice in maternity care

In the final article of this thesis, we reflected on the going debate about 'appropriate' place of birth - home or hospital. In the past years, this topic has been discussed in the public domain in many countries with professional stands and arguments based on the biomedical ethical principles of autonomy and beneficence. We explored whether the model of shared decision-making can help to address this complex situation in the everyday encounter between the care professional and pregnant woman.

We argue that through the use of shared decision-making, there is an opportunity to enter into a discussion that maintains the integrity of all of the individuals involved. An approach utilizing shared decision-making allows a process of increased knowledge and understanding for the woman and her partner while they make choices regarding place of birth.

Chapter 8

General discussion

In this chapter, we present an overview of our main findings; we discuss these findings, consider the methodological limitations and strengths of our research, address the implications of our findings for maternity care practice and education, and offer suggestions for further research.

Choice in maternity care

Women in Dutch midwifery practices wanted to take responsibility for their own well-being and desired to make their own choices. They wished their choice to be a genuine choice: they expected to be offered different options and to be respected in the choice they made. Looking at birthing positions, we saw that not all women had equal access to their preference. Women who preferred a less common choice in birthing positions (e.g. a non-supine position), who were less educated or had a hospital birth were less likely to use their preference. For genuine choice, it is crucial that care professionals are open to women's active participation in care and are skilled to meet women's preferences and desires.

Women felt more in control during birth if they experienced an influence on birthing positions. Women preferring less common positions seemed to benefit from sharing the influence on birthing positions together with their midwives. Facilitating women's choices was found to be a dynamic process and required a variety of styles from care professionals. These styles moved between an open, informative approach and a more closed, directive approach depending on the needs of the woman and clinical assessments. We found that when a woman had specific ideas about the use of certain birthing positions, and the care professional started working with her, the woman also actively worked with the professional. This suggests that women – also when they have an outspoken preference - are willing to work together when they experience a professional who listens and takes them seriously.

Shared decision-making in maternity care

Women value midwives' support in decision-making, seeing them as professionals who can oversee the whole perinatal period. Women expected their midwife to take a proactive approach in providing them with information and exploring their preferences.
Shared decision-making offers a model for approaching decision-making in the interaction between women and their care professionals. Shared decision-making in maternity care is a dynamic process that starts in antenatal care and ends after birth when important decisions made earlier are revisited and discussed. Professional support should prepare women, beginning in the antenatal period, for unexpected and urgent decisions. The experts saw establishing a positive relationship with the woman as an important professional competency for shared decision-making. The interactive exchange of professional information and personal information (the background of the woman's preferences) allows a process that imparts knowledge and increases support while the woman and her partner make choices. Through the use of shared decision-making, there is an opportunity to enter into a discussion that maintains the integrity of all of the individuals involved.

To achieve women's desire for self-responsibility and having genuine choices, and to help avoid women's feelings of abandonment, women's role in decision-making should be embedded in a process of shared decision-making.

Several recommendations can be made for everyday practice, the care system and education. In everyday practice, potential choices (e.g. on place of birth) need to be explored early enough during pregnancy to give women sufficient time to process the information and consider their options. Maternity care professionals need to make women aware of choices and options. They need to proactively and openly discuss women's expectations, preferences, and the role women want to play in decision-making.

Education programmes for maternity care professionals need to integrate shared decision-making in their curricula as a part of the professional attitude, making students aware of the importance of shared decision-making and offering them opportunities to practice their skills in simulation and real life situations.

This thesis is a step forward towards full understanding and use of shared decision-making in maternity care, but more research is needed.

It is critical, that a larger group of women validate the quality criteria for shared decision-making from the Delphi study. Development and evaluation of women-tailored interventions are needed, adaptable to women with different characteristics and to different types of decisions. These interventions should enable women to participate in elaboration about choices and make decisions that reflect their values, needs and circumstances, without increasing their anxiety or fear of childbirth.

Promoting women's involvement in health care also has implications for women's involvement in research on health care delivery and services. Future research into shared decision-making in maternity care should include women as partners in research.

A mutual process of decision-making is part of a whole package of listening to women in maternity care. A woman-centred approach – where women and their babies are put in the heart of care – is not possible without shared decision-making.

Samenvatting

Een kind baren is een ingrijpende gebeurtenis die invloed heeft op de fysieke en emotionele gezondheid van de vrouw. Deze heeft niet alleen baat bij een medisch veilige bevalling maar ook bij een positieve bevallingservaring; beide zijn van belang voor een goede start van gezond ouderschap. Wanneer de vrouw een gevoel van controle heeft tijdens de bevalling draagt dat bij aan een positieve bevallingservaring. Dat gevoel van controle wordt versterkt als de vrouw weet wat er gaat gebeuren, als zij keuzes kan maken en als zij kan participeren in de beslissingen die worden genomen.

Dit proefschrift beschrijft onderzoek naar het betrekken van de vrouw bij het nemen van beslissingen binnen de verloskundige zorg, met specifieke aandacht voor het kiezen van baringshoudingen. Daarbij werd onderzocht hoe het model van gezamenlijke besluitvorming vrouwen en zorgverleners kan ondersteunen bij het nemen van de beslissingen.

Het doel van dit onderzoek was inzicht te krijgen in de behoeften en wensen van de vrouw wat betreft het participeren in het nemen van beslissingen binnen de verloskundige zorg en vervolgens deze inzichten op een dusdanige manier te vertalen dat zorgverleners deze kunnen gebruiken bij gezamenlijke besluitvorming in de dynamische context van zwangerschap en bevalling.

Hoofdstuk 1

Inleiding

Het eerste hoofdstuk beschrijft de gedachtegang, de doelen en de opbouw van dit proefschrift.

Het concept van gezamenlijke besluitvorming vormde de basis voor het onderzoek in dit proefschrift. Gezamenlijke besluitvorming wordt gedefinieerd als 'betrokkenheid van zowel patiënt als zorgverlener, het delen van informatie door beide partijen, het ondernemen van stappen door beide partijen om consensus te bereiken over de gewenste aanpak, en het bereiken van overeenstemming over welke optie wordt toegepast'. In de afgelopen twee decennia is er veel onderzoek gedaan naar de toepassing en het effect van gezamenlijke besluitvorming binnen de geneeskunde. Maar de resultaten van deze onderzoeken zijn niet zonder meer toepasbaar binnen de verloskundige zorg. Gezamenlijke besluitvorming binnen andere gebieden van de gezondheidszorg veronderstelt tijd, ruimte voor overleg tussen partijen en gelegenheid om inzicht te krijgen in de individuele voorkeuren en wensen wat betreft de zorg. Deze condities zijn wel aanwezig tijdens de zwangerschap, maar tijdens de baring is het proces van uitwisselen van informatie, het communiceren over klinische bevindingen en het komen tot een beslissing veel lastiger.

In dit proefschrift werd het kiezen uit baringshoudingen gebruikt als voorbeeld om de betrokkenheid van de vrouw bij de verloskundige zorg te onderzoeken. Er is niet

wetenschappelijk bewezen dat een bepaalde baringshouding beter zou zijn dan een andere. Daarom kan zonder bezwaar haar voorkeur voor een bepaalde houding gevolgd worden.

Als eerste hebben we onderzocht wat bijdraagt aan een positieve ervaring en het welbevinden van de vrouw tijdens zwangerschap en bevalling. De onderzoeksvraag was:

1. Wat zijn de wensen en behoeftes van zwangere vrouwen ten aanzien van psychosociale steun door verloskundigen gedurende de transitie naar moederschap? (hoofdstuk 2)

De vrouwen in dit onderzoek hadden behoefte aan een verloskundige die op een proactieve manier deelname aan beslissingen ondersteunt en faciliteert. Daarom deden wij verder onderzoek naar de rol van de vrouw in het keuzeproces rondom baringshoudingen aan de hand van drie onderzoeksvragen:

2. Aan welke baringshoudingen geven vrouwen de voorkeur en maken ze ook daadwerkelijk gebruik van die gemaakte keuze tijdens de uitdrijvingsfase van de baring? Welke factoren spelen een rol bij het al of niet gebruik maken van de voorkeurshouding? (hoofdstuk 3)
3. Wat is de relatie tussen het kiezen van baringshoudingen en het gevoel van controle gedurende de uitdrijvingsfase? (hoofdstuk 4)
4. Hoe verloopt de communicatie tussen vrouwen en verloskundige zorgverleners over keuzes maken en beslissingen nemen over baringshoudingen tijdens de uitdrijving? (hoofdstuk 5)

Uit deze onderzoeken bleek dat besluitvorming in de praktijk een gezamenlijk proces is waarin zowel vrouwen als professionele zorgverleners participeren. Vervolgens verkenden we hoe een proces van gezamenlijke besluitvorming een plaats kan krijgen in de verloskundige zorg, zowel binnen als buiten de spreekkamer. De onderzoeksvraag was:

5. Welke elementen moeten kwaliteitscriteria bevatten voor gezamenlijke besluitvorming in de diverse situaties tijdens zwangerschap en bevalling en welke professionele competenties zijn daarbij nodig? (hoofdstuk 6)

Hoofdstuk 2

Vrouwen wensen tijdens de transitie naar moederschap proactieve ondersteuning door de verloskundige: een kwalitatieve studie.

In dit hoofdstuk worden de resultaten neergelegd van focusgroep interviews met gezonde zwangere vrouwen in Nederlandse verloskundigenpraktijken. We verkenden de meningen van vrouwen over psychosociale ondersteuning door verloskundigen tijdens hun transitie naar moederschap. De 21 vrouwen, die deelnamen waren verdeeld over 3 focusgroepen. De vrouwen in groep 1 (n=7) en groep 3 (n=8) waren afkomstig uit vier verloskundigenpraktijken in een semi-verstedelijkt gebied, de vrouwen in groep 2 (n=6) waren afkomstig uit drie verloskundigenpraktijken in een verstedelijkt gebied.

De vrouwen gaven aan dat zij verantwoordelijkheid wilden nemen voor hun eigen welzijn. Zij benadrukten dat zij behalve aan informele steun van familieleden of vrienden ook behoefte hadden aan ondersteuning door hun verloskundige bij het proces van transitie naar moederschap. Zij maakten duidelijk informatie en emotionele ondersteuning te willen ontvangen met betrekking tot psychologische en fysieke veranderingen tijdens hun zwangerschap. Maar de vrouwen wilden uiteindelijk hun eigen keuzes maken. En om dit mogelijk te maken wensten zij ondersteuning door hun verloskundigen omdat deze in staat is de gehele periode te overzien en hen kan helpen om de informatie op een adequate wijze te interpreteren. Zij verwachtten van hun verloskundige een proactieve benadering, een oprechte luisterhouding en hulp bij het versterken van hun zelfvertrouwen.

Hoofdstuk 3

Factoren die van invloed zijn op het voldoen aan de voorkeuren van vrouwen ten aanzien van baringshouding tijdens de uitdrijvingsfase.

In deze studie onderzochten we de voorkeuren van vrouwen voor een bepaalde baringshouding tijdens de uitdrijving, met bijzondere aandacht voor vrouwen die voorkeur hadden voor een andere houding dan de rugligging. Cliënten van 54 Nederlandse verloskundigenpraktijken ontvingen een enquêteformulier.

Van de 1154 deelnemende vrouwen had 58,9% een voorkeur voor de rugligging, 19,6% gaf aan andere houdingen de voorkeur (zoals zittend of staand), en 21,5% had geen duidelijke voorkeur. Vrouwen die voorkeur hadden voor de rugligging bevielen vaker in die gekozen houding dan vrouwen met een voorkeur voor andere houdingen.

Bij de vrouwen met een voorkeur voor andere houdingen was het daadwerkelijk volgen van hun voorkeur gerelateerd aan een langere duur van de fase van uitdrijving, een hoger opleidingsniveau, een sterke voorkeur voor die bepaalde houding en het thuis bevallen.

Deze resultaten maken duidelijk dat er verschillen zijn in het wel of niet daadwerkelijk gebruiken van de voorkeur. Verloskundigen kunnen een bijdrage leveren aan cliëntgerichte zorg door proactief, tijdens zwangerschap en bevalling, de voorkeuren van vrouwen voor een bepaalde baringshouding duidelijk te krijgen, door hen te ondersteunen bij het ontwikkelen van keuzes op basis van adequate informatie en deze keuzes waar mogelijk te faciliteren.

Hoofdstuk 4

Invloed van de vrouw op baringshoudingen heeft effect op haar gevoel van controle tijdens de uitdrijvingsfase.

Dit hoofdstuk toont de resultaten van een studie die onderzoekt of keuze in baringshoudingen een bijdrage levert aan het gevoel van controle bij de vrouw. Hiervoor werden dezelfde data gebruikt als vermeld in hoofdstuk 3. Aan de hand van multipele regressie

analyses werd onderzocht welke factoren die verband houden met keuzes in baringshoudingen het gevoel van controle bij de vrouw gedurende de uitdrijvingsfase beïnvloeden. Bij de totale groep vrouwen (n = 1030) waren significante voorspellers voor het gevoel van controle: invloed op baringshouding (zelf of samen met anderen), deelname aan zwangerschapscursus, de gevoelens ten aanzien van de bevalling tijdens de zwangerschapsperiode en pijn tijdens de uitdrijvingsfase. Voor vrouwen met een voorkeur voor een andere houding dan de rugligging (n = 204) waren significante voorspellers: invloed op baringshouding (zelf of samen met anderen), de gevoelens ten aanzien van de bevalling tijdens de zwangerschapsperiode, pijn tijdens de uitdrijvingsfase en het thuis bevallen. Voor deze vrouwen had invloed op de baringshoudingen in combinatie met anderen een groter effect op het gevoel van controle dan wanneer alleen zij zelf invloed hadden op hun baringshouding.

Vrouwen gaven te kennen meer gevoel van controle tijdens de bevalling te hebben wanneer ze ervoeren invloed te kunnen uitoefenen op welke baringshouding wordt gekozen. Voor vrouwen met een voorkeur voor een andere houding dan de rugligging leek een thuisbevalling en gezamenlijke besluitvorming toegevoegde waarde te hebben.

Hoofdstuk 5

De rol van verloskundige zorgverleners bij de bevordering van gedeelde besluitvorming met betrekking tot baringshoudingen tijdens de uitdrijvingsfase.

Dit onderzoek naar baringshoudingen was een verkennende kwalitatieve studie, gebaseerd op audio-opnames van het uitdrijvingsproces bij vrouwen die nog niet eerder een kind hadden gebaard en bevielen in een academisch ziekenhuis in de USA. Het doel van dit onderzoek was te verkennen op welke manier verloskundige zorgverleners tijdens het baringsproces met de vrouw communiceren over baringshoudingen. Op basis van literatuur werd een raamwerk ontwikkeld om te komen tot een proces van deductieve inhoudsanalyse. Aan de hand van literatuur over gezamenlijke besluitvorming, gevoel van controle, en voorspellers van een positieve bevallingservaring werd een raamwerk voor het proces van analyse ontwikkeld. Het raamwerk omvatte de volgende categorieën: het luisteren naar de vrouwen, aanmoediging, informeren, het aanbieden van keuzes en stijl van ondersteuning. Eenenveertig geluidsbanden waarop de vrouwen en hun verloskundige zorgverleners te horen waren gedurende het uitdrijvingsproces, werden schriftelijk vastgelegd en geanalyseerd.

De thema's die uit deze verslagen naar voren kwamen omvatten alle categorieën van het raamwerk plus twee nieuwe categorieën op het gebied van communicatie: empathie en interactie. De verloskundige zorgverleners uit deze studie stelden de vrouwen in staat om uit verschillende baringshoudingen te kiezen middels een dynamisch proces dat zich bewoog tussen een open, informatieve benadering enerzijds en een meer gesloten, directieve benadering anderzijds, naargelang de behoefte van de vrouw en de klinische omstandigheden. Vrouwen namen actiever deel aan gezamenlijke besluitvorming met

betrekking tot baringshoudingen wanneer de zorgverleners een juiste balans wisten te vinden tussen het gehoor geven aan vragen en het directief zijn als de klinische omstandigheden dat vereisten.

Zorgverleners kunnen de vrouw helpen om verschillende baringshoudingen aan te nemen tijdens de uitdrijvingsfase door een flexibele stijl te hanteren die de eigen klinische beoordeling en reacties van de vrouw combineert.

Hoofdstuk 6

In gesprek: een Delphi studie naar gedeelde besluitvorming in de verloskundige zorg.

Dit hoofdstuk laat de resultaten zien van een onderzoek naar kwaliteitscriteria en professionele competenties ten behoeve van gezamenlijke besluitvorming in de verloskundige zorg. De aandacht ging daarbij vooral uit naar het nemen van beslissingen in de dagelijkse praktijk bij vrouwen met een laag risico. Voor dit onderzoek werd een web-based Delphi onderzoek uitgevoerd met drie rondes. Het panel bestond uit internationale experts op het gebied van gezamenlijke besluitvorming en van verloskundige zorg: verloskundigen, gynaecologen, opleiders, onderzoekers, beleidsmakers en vertegenwoordigers van zorggebruikers. Ronde 1 bevatte open vragen om na te gaan welke ingrediënten relevant zijn voor gezamenlijke besluitvorming in de verloskundige zorg en om na te gaan welke competenties daarvoor nodig zijn. In ronde 2 en 3 beoordeelden experts uitspraken over kwaliteitscriteria en competenties op een 7-punts Likert-schaal. A priori werd positieve consensus gedefinieerd als: 70% of meer van de experts hebben een score ≥ 6 (70 % panel overeenstemming).

Er werd consensus bereikt over 45 uitspraken met betrekking tot kwaliteitscriteria en over 4 uitspraken met betrekking tot competenties. Experts zagen gezamenlijke besluitvorming als een dynamisch proces dat begint bij de zwangerschapscontroles en eindigt na de geboorte bij het nabespreken van belangrijke beslissingen die eerder werden genomen. De experts waren het er over eens dat de regelmatige controles tijdens de zwangerschap de mogelijkheid bieden om een relatie op te bouwen, te anticiperen op situaties die zich kunnen gaan voordoen en complexe onderwerpen nog eens door te nemen. Open en respectvolle communicatie tussen vrouwen en zorgverleners is essentieel; informatie moet nauwkeurig, evidence-based en begrijpelijk zijn; professionele ondersteuning dient vrouwen al in de prenatale periode voor te bereiden op mogelijk onverwachte en urgente beslissingen tijdens de bevalling. De experts zagen het opbouwen van een relatie met de vrouw als een belangrijke professionele competentie voor gezamenlijke besluitvorming. Zij waren echter verdeeld over de bijdrage van professioneel advies in de besluitvorming en over de rol van de partner. Wel waren zij het er over eens dat zorgprofessionals hun inzichten kunnen inbrengen als deze op bewijs gebaseerd zijn, maar er was geen consensus over het inbrengen van standpunten die gebaseerd waren op professionele of persoonlijke ervaringen. Ook wat betreft de

noodzaak om de partner te betrekken bij het verstrekken van informatie en het bespreken van de verschillende opties waren de experts het eens, maar er was geen consensus over het betrekken van de partner bij de uiteindelijke beslissing.

Gezamenlijke besluitvorming in de verloskundige zorg is een dynamisch proces dat rekening houdt met de individuele behoeften van vrouwen en met de context van de zwangerschap of geboorte. De gevonden criteria en competenties kunnen zorgverleners helpen om gezamenlijke besluitvorming in de praktijk toe te passen en opleiders kunnen deze gebruiken bij het uitrusten van toekomstige professionals met vaardigheden voor gezamenlijke besluitvorming.

Hoofdstuk 7

Het faciliteren van de keuze van de vrouw wat betreft verloskundige zorg.

In het laatste artikel van dit proefschrift besteedden we aandacht aan de lopende discussie over de 'meest geschikte' plaats van bevallen: thuis of in het ziekenhuis. In de afgelopen jaren is dit in vele landen onderwerp van gesprek, met professionele standpunten en discussies op basis van medisch ethische principes als "respect voor autonomie" en "weldoen". Wij verkenden of het model van gezamenlijke besluitvorming van nut kan zijn bij het aanpakken van deze complexe materie in het dagelijkse contact tussen zorgverlener en zwangere vrouw.

We stellen dat door het model van gezamenlijke besluitvorming te hanteren er een mogelijkheid ontstaat een discussie aan te gaan die de integriteit van alle betrokkenen respecteert. Gezamenlijke besluitvorming maakt een proces mogelijk waarbij toenemende kennis bij en begrip voor de vrouw en haar partner kunnen ontstaan, terwijl zij hun keuze maken voor de plaats van bevallen.

Hoofdstuk 8

Algemene discussie

In dit hoofdstuk wordt een overzicht van de belangrijkste bevindingen gegeven en worden deze nader besproken. Ook nemen we de sterke en zwakke kanten van de gekozen onderzoeksmethoden onder de loep. We eindigen met adviezen en aanbevelingen voor de verloskundige praktijk en onderwijs, en doen suggesties voor verder onderzoek.

Keuzes in verloskundige zorg

Vrouwen in Nederlandse verloskundige praktijken gaven aan dat zij de verantwoordelijkheid voor hun eigen welzijn willen nemen en hun eigen keuzes willen maken. Zij willen dat hun keuze ook werkelijk een keuze kan zijn: ze verwachten dat hen verschillende opties worden aangeboden en dat de keuze die zij maken gerespecteerd wordt. Kijkend naar baringshoudingen, liet onderzoek zien dat niet alle vrouwen gelijke toegang hadden tot hun voorkeur. Vrouwen die de voorkeur gaven aan een minder vaak voorkomende

baringshouding, die lager opgeleid waren of kozen voor een bevalling in het ziekenhuis, konden minder vaak hun voorkeur daadwerkelijk volgen. Voor het kunnen maken van een echte keuze is cruciaal dat zorgprofessionals open staan voor een actieve participatie van de vrouw in de zorg en dat zij toegerust zijn met vaardigheden om in te gaan op de voorkeuren en wensen van de vrouw.

Vrouwen hadden een sterker gevoel van controle tijdens de bevalling wanneer ze invloed hadden op de gebruikte baringshoudingen, alleen of samen met anderen. Vrouwen met een minder gebruikelijke voorkeur hadden dit vooral als ze de invloed samen met hun verloskundige deelden. Het faciliteren van keuzes bleek een dynamisch proces en vereiste een verscheidenheid aan stijlen van de zorgverleners. Deze stijlen varieerden van een open, informatieve benadering tot een meer gesloten, directieve benadering, afhankelijk van de behoeften van de vrouw en de klinische omstandigheden. Wij merkten dat wanneer de vrouw uitgesproken ideeën had over het gebruik van bepaalde baringshoudingen, en de zorgprofessional met haar ging samenwerken, de vrouw op haar beurt eveneens actief ging samenwerken met de professional. Dit wijst er op dat vrouwen – ook als ze een uitgesproken voorkeur hebben - bereid zijn om samen te werken als zij ervaren dat de professional naar hen luistert en hen serieus neemt.

Gezamenlijke besluitvorming in de verloskundige zorg

Vrouwen waarderen de ondersteuning van verloskundigen bij het nemen van beslissingen omdat zij hen zien als professionals die de gehele perinatale periode kunnen overzien. Zij verwachten van hun verloskundige een proactieve benadering bij het verstrekken van informatie en het verkennen van hun voorkeuren.

Gezamenlijke besluitvorming biedt een model voor het benaderen van beslissingen vanuit de interactie tussen vrouwen en hun zorgprofessionals. Gezamenlijke besluitvorming in de verloskundige zorg is een dynamisch proces dat begint tijdens de zwangerschapscontroles en eindigt na de geboorte, wanneer belangrijke eerder genomen beslissingen opnieuw worden besproken. Professionele ondersteuning dient de vrouw voor te bereiden, te beginnen in de prenatale periode, op onverwachte en snel te nemen beslissingen. De experts zagen het opbouwen van een relatie met de vrouw als een belangrijke professionele competentie voor gezamenlijke besluitvorming. Een interactieve uitwisseling van professionele informatie en persoonlijke informatie (achtergrond informatie over de voorkeuren van de vrouw) maakt een proces mogelijk dat de vrouw en haar partner kennis verschaft en ondersteuning biedt bij het maken van keuzes. Het toepassen van gezamenlijke besluitvorming biedt de mogelijkheid een gesprek aan te gaan waarbij de individuele integriteit van alle betrokkenen kan worden gewaarborgd.

Om tegemoet te komen aan de wens van vrouwen om zelf hun verantwoordelijkheid te kunnen nemen en goed onderbouwde keuzes te kunnen maken, en tegelijkertijd het gevoel van in de steek gelaten worden te voorkomen, dient de rol van de vrouw in de besluitvorming ingebed te zijn in een proces van gezamenlijke besluitvorming.

Ten behoeve van de dagelijkse praktijk, het zorgsysteem en het onderwijs kunnen diverse aanbevelingen worden gedaan. In de dagelijkse praktijk dienen mogelijke keuzes (bijvoorbeeld met betrekking tot de plaats van bevalling) vroeg genoeg in de zwangerschap besproken te worden om zo de vrouw voldoende tijd te geven voor het verwerken van de informatie en het overdenken van de verschillende opties. Verloskundige zorgprofessionals dienen de vrouw bewust te maken van mogelijke keuzes en opties. Zij moeten daarbij proactief en open de verwachtingen en voorkeuren van de vrouw bespreken evenals de rol die de vrouw wil spelen bij het nemen van beslissingen.

Het is noodzakelijk dat onderwijsprogramma's voor verloskundige professionals 'gezamenlijke besluitvorming' integreren in hun curricula als een onderdeel van professioneel gedrag. Om zo studenten bewust te maken van het belang van gezamenlijke besluitvorming en hen de mogelijkheid te bieden tot het oefenen van vaardigheden zowel middels simulatieoefeningen als in echte praktijksituaties.

Dit proefschrift is een stap in de richting van een volledig inzicht in en gebruik van gezamenlijke besluitvorming in de verloskundige zorg, maar meer onderzoek is noodzakelijk.

Het is belangrijk dat een grotere groep vrouwen de kwaliteitscriteria voor gezamenlijke besluitvorming uit de Delphi studie valideren. Ook ontwikkeling en evaluatie van interventies is noodzakelijk, interventies die zijn toegesneden op vrouwen met verschillende kenmerken en op de verschillende soorten beslissingen. Deze interventies moeten het mogelijk maken om vrouwen te laten participeren in discussies over keuzes en beslissingen te laten nemen die aansluiten bij hun waarden, behoeften en omstandigheden, zonder dat hun angst voor de bevalling toeneemt.

Het bevorderen van de betrokkenheid van de vrouw bij beslissingen binnen de gezondheidszorg heeft tevens gevolgen voor de betrokkenheid van de vrouw bij onderzoek binnen de verloskunde. Bij toekomstig onderzoek naar gezamenlijke besluitvorming in de verloskundige zorg dienen vrouwen als werkelijke partners betrokken te worden.

Cliëntgerichte zorg - waarbij moeder en kind in de hoofdrol staan – is niet mogelijk zonder gezamenlijke besluitvorming.

List of publications

- **Nieuwenhuijze M**, Korstjens I, de Jonge A, de Vries R, Lagro-Janssen T. On speaking terms: A Delphi study on shared decision-making in maternity care. Submitted.
- **Nieuwenhuijze MJ**, Kane Low L, Korstjens I, Lagro-Janssen ATM. The role of maternity care providers in promoting shared decision-making regarding birthing positions during second stage labor. Journal of Midwifery and Women's Health 2014, in press.
- van Haaren-ten Haken T, Pavlova M, Hendrix M, **Nieuwenhuijze M**, de Vries R, Nijhuis J. Eliciting preferences for key attributes of intrapartum care in the Netherlands. Birth 2014, in press.
- Daemers D, Wijnen H, van Limbeek E, **Nieuwenhuijze M**, Bude L, Spaanderman M, de Vries R. The impact of obesity on outcomes of midwife-led pregnancy and childbirth in a primary care population: a prospective cohort study. BJOG, in press.
- **Nieuwenhuijze MJ**, Kane Low L. Facilitating Women's Choice in Maternity Care. The Journal of Clinical Ethics 2013;24:276-82.
- Fontein Y, **Nieuwenhuijze MJ**, Ausems M, Budé L, de Vries R. Antenatal interventions to reduce maternal distress: a systematic review and meta-analysis of randomized controlled trials. BJOG 2014;121:389-97.
- Schoorel EN, Vankan E, Scheepers HC, Augustijn BC, Dirksen CD, de Koning M, van Kuijk SM, Kwee A, Melman S, Nijhuis JG, Aardenburg R, de Boer K, Hasaart TH, Mol BW, **Nieuwenhuijze M**, van Pampus MG, van Roosmalen J, Roumen FJ, de Vries R, Wouters MG, van der Weijden T, Hermens RP. Involving women in personalised decision-making on mode of delivery after caesarean section: the development and pilot testing of a patient decision aid. BJOG 2014;121:202-9.
- Spelten E, **Nieuwenhuijze M**. Midwifery research in the Netherlands: gaining momentum. International Journal of Childbirth 2013;3:195-202.
- **Nieuwenhuijze MJ**, Korstjens I, de Jonge A, Budé L, Lagro-Janssen T. Niet alle vrouwen willen op de rug bevallen. Tijdschrift voor Verloskundigen 2013;38:22-6.
- De Vries R, **Nieuwenhuijze M**, Buitendijk S, members of the Midwifery Science Group. What does it take to have a strong and independent profession of midwifery? Lessons from the Netherlands. Midwifery 2013;29:1122-28.
- Fontein-Kuipers YJ, Bude L, Ausems M, de Vries R, **Nieuwenhuijze MJ**. Dutch midwives' behavioural intentions of antenatal management of maternal distress and factors influencing these intentions: An exploratory survey. Midwifery 2013.
- **Nieuwenhuijze MJ**, de Jonge A, Korstjens I, Budé L, Lagro-Janssen T. Influence on birthing positions affects women's sense of control in second stage of labour. Midwifery 2013;29:e107-14.
- Christiaens W, **Nieuwenhuijze MJ**, de Vries R. Trends in the medicalisation of childbirth in Flanders and the Netherlands. Midwifery 2013:29:e1-e8.

- van Haaren-ten Haken T, Hendrix M, **Nieuwenhuijze M**, Budé L, de Vries R, Nijhuis J. Preferred place of birth: Characteristics and motives of low-risk nulliparous women in the Netherlands. Midwifery 2012;28:609-18.
- **Nieuwenhuijze M**, de Jonge A, Korstjens I, Lagro-Janssen T. Factors influencing the fulfillment of women's preferences for birthing positions during second stage of labor. Journal of Psychosomatic Obstetrics & Gynecology 2012;33:25-31.
- De Vries RG, **Nieuwenhuijze M**, van Crimpen R, members of the Midwifery Science Group. The Necessity and challenge of international midwifery science. International Journal of Childbirth 2011;1(1).
- Hendrik M, Pavlova M, **Nieuwenhuijze MJ**, Severens J, Nijhuis J. Differences in preferences for obstetric care between nulliparae and their partners in the Netherlands: a discrete-choice experiment. Journal of Psychosomatic Obstetrics & Gynecology 2010;31(4):243–251.
- Seefat-van Teeffelen A, **Nieuwenhuijze M**, Korstjens I. Proactieve psychosociale begeleiding: een kwalitatief onderzoek. Tijdschrift voor Verloskundigen, 2010;35:20-4.
- Seefat-van Teeffelen A, **Nieuwenhuijze M**, Korstjens, I. Women want proactive psychosocial support from midwives during transition to motherhood: a qualitative study. Midwifery 2011;27:e122-7.
- Hendrik M, Van Horck M, Moreta D, Nieman F, **Nieuwenhuijze M**, Severens J, Nijhuis J. Why women do not accept randomisation for place of birth: feasibility of a RCT in the Netherlands. BJOG 2009;116(4):537-542.
- **Nieuwenhuijze M**. Internationale Standaard voor het opleiden van verloskundigen. Tijdschrift voor Verloskundigen 2009; 7: 52-3.
- Bakker E, **Nieuwenhuijze M**. Voorlichting in de eerstelijns verloskundige praktijk. Maastricht, 2004.
- **Nieuwenhuijze M**. Werken aan de eerste standaard. Tijdschrift voor Verloskundigen 2001; 1: 26-8.
- **Nieuwenhuijze M**. De begeleiding van de normale baring. Tijdschrift voor Verloskundigen 2001; 12: 966-7.
- **Nieuwenhuijze M**, Prins M. De begeleiding van de normale baring. Kerkrade, 2001.

Dankwoord

Dit proefschrift is tot stand gekomen met de wijze raad, steun en inspiratie van veel mensen. Hiervoor wil ik alle betrokkenen bedanken.

In de eerste plaats bedank ik alle vrouwen in Nederland en de Verenigde Staten die meegedaan hebben aan de verschillende onderzoeken. Jullie deelden je wensen, behoeften, gedachten en je bevallingservaringen, daarmee gaven jullie mij veel belangrijke informatie. Jullie inbreng maakt het mogelijk om de verloskundige zorg te verbeteren en vrouwen zorg te geven aangepast aan hun behoeften en situatie.
Verder dank ik de experts in het Delphi onderzoek. Jullie gaven mij toegang tot jullie ideeën en ervaringen, waarbij jullie veel van jullie kostbare tijd besteedden aan het beantwoorden van mijn vragen. Jullie inbreng was van grote waarde.
First, I like to thank all the women in the Netherlands and in the United States who participated in the different studies. You shared your wishes, needs, thoughts and your birth experiences, which gave me treasured information. All this input will help to offer women care tailored to their wishes and circumstances.
I also want to thank all the experts who contributed to the Delphi study. You generously shared your ideas and experiences, spending a lot of time answering my questions. Your contribution has been incredibly valuable.

Uiteraard wil ik mijn begeleidingscommissie bedanken.
Lieve Toine, je gaf me de ruimte om zelf invulling te geven aan dit proefschrift. Steeds weer was je enthousiast, kritisch en open. Dat was voor mij de juiste aanpak. Je gaf mij de inspiratie om door te gaan en iedere keer een stap verder te komen.
Raymond, je hebt mij letterlijk en figuurlijk voorbij de grenzen van mijn vak laten kijken. Dit droeg enorm bij aan mijn nieuwsgierigheid en motivatie om dit onderwerp van meerdere kanten te bekijken.
Ank, je was mijn verloskundige maatje in dit project. Je nuchtere, praktische insteek en je geloof in het belang van dit project hielden me gefocust op het doel.
Irene, je was er bij vanaf het begin en steeds was je positief en enthousiast. Het was geweldig om met je te brainstormen over de resultaten en de volgende stap in het onderzoek.

Dear Lisa, thank you so much for your friendship and support. You showed me so many aspects of being "born in the USA", both alarming and amazing things. You opened many doors. Thank you, it was wonderful to work with you.
Dear Charlotte, you were the invisible supporter in this group. You very generously welcomed me in your house, made me feel at home in your country and were always curious about how I was moving on.

I thank the University of Michigan, School of Nursing, for accepting me as a PhD student, facilitating me during the time that I studied there. It was a very interesting and positive period.

Beste (oud-)directeuren van de AVM, dank voor de kansen die jullie mij gaven. Promoveren was een grote klus naast een enerverende baan, jullie steun was onvoorwaardelijk. Beste collega's, het is geweldig om collega's te hebben die steeds nieuwsgierig vragen naar je vorderingen, die trots zijn op wat je bereikt. Het is fijn om met zo'n groep samen te werken.

Beste verloskundige collega's - mijn "vroedvrouwengroepje", de Mammoni club, mijn jaargenoten, de leden van de VIL commissie en de vele verloskundige zorgverleners uit het werkveld -: de gesprekken over de huidige en toekomstige ontwikkelingen in de verloskunde waren een grote stimulans om onderzoek te willen doen en om meer te ontdekken over hoe we de verloskundige zorg kunnen verbeteren. We hebben zoveel kanten van de zorg besproken, maar steeds stond voorop: goede zorg voor iedere zwangere vrouw.

En dan waren er nog zoveel vrienden en familie die me overeind hielden door met me te reizen, te wandelen, films te bezoeken en te praten over boeken. Die pauzes hebben gezorgd dat ik niet verzwolgen ben door mijn laptop.

Marjo en Judith bedankt voor jullie hulp bij het de afwerking van dit proefschrift.
Mijn paranimfen – Adja en Derk – het is eindelijk zover. Dank dat jullie achter mij willen staan en alle feestelijkheden mee organiseren.

Theo, Derk en Bele, dank dat jullie er zijn. We lijken soms los zand. Maar dan wel op hetzelfde strand. En dat is een prachtige plek …!

Curriculum Vitae

Marianne Nieuwenhuijze was born on 13th June 1959 in Vlissingen, the Netherlands, where she grew up and graduated from secondary school (1977). She did her midwifery training in Heerlen, received her diploma in 1980 and started to work as a midwife. In her family, she is the third generation of women active in maternity care. She followed in the footsteps of her grandmother who was a birth attendant in a rural village in Groningen and her mother who was a maternity care nurse in the community and the hospital.

First, she worked as a hospital midwife in the Laurentius Hospital in Roermond and subsequently as a primary care midwife in a midwifery group practice in the same town. In 1999, she started to work as a lecturer at the Midwifery School in Kerkrade, now faculty of Midwifery Education and Studies (Academie Verloskunde Maastricht), Zuyd in Maastricht. She has been involved in the management of the school since 2001. Over the years, she was the lead of several curriculum development cycles for the bachelor of midwifery, initiated and developed the programme of the European Master of Science in Midwifery in Maastricht and grounded the research centre for Midwifery Science. In December 2008, she completed her Master of Public Health and started with her PhD project. She is now head of this research centre with various research and PhD projects on: physiologic process of pregnancy and childbirth, health promotion in pregnancy and childbirth, evidence-based Midwifery, and interprofessional collaboration in maternity care.

Marianne Nieuwenhuijze is geboren op 13 juni 1959 te Vlissingen, waar zij opgroeide en de middelbare school afrondde aan het CSW in Middelburg (1977). Zij deed haar opleiding tot verloskundige aan de Vroedvrouwenschool in Heerlen, studeerde af in 1980 en ging aan het werk als verloskundige. Daarmee volgde zij als derde generatie in de voetsporen van haar oma die baker was in een Gronings dorp en van haar moeder die werkte als kraamverpleegkundige binnen en buiten het ziekenhuis.

Zij werkte eerst als klinisch verloskundige in het Laurentius Ziekenhuis, Roermond en vervolgens als eerstelijns verloskundige bij een groepspraktijk in dezelfde stad. In 1999, begon ze als docent aan de Vroedvrouwenschool in Kerkrade (nu: Academie Verloskunde Maastricht, Zuyd). Daar is zij sinds 2001 betrokken bij het management van de school. Door de jaren heen was zij projectleider van verschillende cycli van curriculum vernieuwing in de bachelor Verloskunde, initieerde en ontwikkelde zij de European Master of Science in Midwifery binnen Maastricht en stond aan de wieg van de vakgroep/lectoraat Midwifery Science, Zuyd. In december 2008 behaalde zij de Master of Public Health en startte zij met haar promotietraject. Zij is nu het hoofd van Midwifery Science, waarbinnen verschillende onderzoeksprojecten plaats vinden op het gebied van de fysiologische zwangerschap en baring, gezondheidsbevordering in de verloskundigenpraktijk, evidence-based practice, en interprofessionele samenwerking in de verloskundige zorg.