Interventions in midwife led care in the Netherlands to achieve optimal birth outcomes: effects and women’s experiences
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Citation for published version (APA):
Rijnders, M. E. B. (2011). Interventions in midwife led care in the Netherlands to achieve optimal birth outcomes: effects and women’s experiences

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Summary of the literature of women’s experiences with birth and maternity care in the Netherlands
In this chapter a summary is presented of the literature of women’s preferences, expectations and experiences with birth, maternity care and interventions in low risk pregnancies in the Netherlands. Not addressed are women’s preferences, expectations and experiences with prenatal screening, (birth after) treatment for miscarriage or stillbirth or preconception care.

Method

Pubmed and Midirs were searched until March 1st 2011. The following search terms were entered:

**MIDIRS**

(Expectat* OR prefer* OR attitude* OR experience* OR satisfaction OR recall) AND (women* OR mother*) AND (Dutch OR Netherlands OR Holland) AND (birth OR deliver* OR pregnanc* OR maternity care OR perinatal care OR midw*) AND NOT (miscarr* OR stillbirth OR prenatal screening OR prenatal testing OR Down syndrome OR neonatal screening OR fertility OR fertilization OR preconception)

**PUBMED**

In Pubmed (Expectation OR preference OR attitude OR experience OR satisfaction OR recall) AND (women OR mother) AND (Dutch OR Netherlands OR Holland) AND (birth OR delivery OR pregnancy OR maternity care OR perinatal care OR midw*) NOT (miscarriage OR stillbirth) NOT (prenatal screening OR prenatal testing OR Down syndrome OR neonatal screening) NOT (fertility OR fertilization OR preconception). The limitations entered in Pubmed were Humans, Female, Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Case Reports, Comparative Study, Controlled Clinical Trial, Journal Article, Multicenter Study, English, German, Dutch, Complementary Medicine, Core clinical journals, MEDLINE, Nursing journals, Systematic Reviews, Young Adult: 19-24 years, Adult: 19-44 years.

The search terms resulted in 181 hits in Midirs in and 325 hits in Pubmed. All titles and abstracts were reviewed by one researcher (MR).

Research articles were included if they addressed a) women’s expectations, preferences or experiences with Dutch maternity care or b) women’s experiences with interventions in primary care that could be an alternative to or prevent referral to specialised obstetric care. Not included were articles that addressed experiences with prenatal screening or testing, (birth after) treatment for miscarriage or stillbirth, preconception care, interventions for high risk women or articles addressing psychosocial determinants of women’s well-being, or maternal outcomes such as depression, low birth weight or hypertension.
In Midirs 25 articles (1-25) and in PubMed 16 articles (2-5; 7; 9; 12-14; 17; 19; 22; 26-29) were identified that fulfilled these criteria. Furthermore, 3 additional articles were identified through references (30-32). In total 33 articles were entered in this summary.

Preferences and expectations

The research that is available on women’s preferences focuses predominantly on preference for place of birth (table 1). At the end of the last century the first studies appeared on women’s preferences towards place of birth. Kleiverda’s study in 1990 (10) showed that the choice of place of birth of low risk nulliparous women in a large urban area was related to women’s characteristics such as educational level and feelings of well being in pregnancy. The other major factor however was how women expected that the environment would influence their feelings, attitudes and behaviour. Eight years later, Wiegers (23) also concluded that for women at low risk of obstetric complications the choice of place of birth was based primarily on social factors, with the confidence of family and friends in home birth and the expected influence of the hospital environment on childbirth listed as the strongest determinants. Health related factors, such as perceived health status before and during pregnancy, physical symptoms and fear of pain and complications during birth played an indirect role. Educational level, in Kleiverda’s study one of the predicting factors, was unrelated to the preferred place of birth except when urbanization was taken into account as well: in the larger cities women with higher education more often preferred a home birth than those with lesser education levels. A prospective study in 25 midwifery practices by van der Hulst et al. (20) showed that 70% of the women opted for a home birth. Except for age, preference for a home birth was not related to socio-demographic factors. A significant relationship was observed between attitude toward technology and preferred place of birth: the more receptive women’s attitude was toward medical technology, the more likely nulliparous and multiparous women were to opt for hospital birth. Only multiparous showed a correlation between their assessment of the chance of ending up with an instrumental delivery and their intended birthplace. Twelve years later Hendrix (28) showed again the strength of women’s preference in choice of place of birth. She described the impossibility to conduct a randomised controlled trial as women were not willing to be randomly allocated to place of birth. The main reasons for declining their participation were that women had made up their mind about preferred place of birth as early as at 12 weeks gestation and also strongly valued their autonomy of choice. However, Pavlova (15) showed that, although Dutch women still expressed a strong preference for a home birth, the non-availability of medical pain-relief during home birth, could be an increasing incentive to opt for a birth in a hospital. She therefore concluded that to
preserve home birth specific attention is needed for the approach to pain during a home birth. On the other hand, if a hospital birth is needed or desired, efforts should be made in offering a domestic atmosphere to improve hospital-based obstetric care in view of women's preferences. More so, an important determinant of choice in type of maternity care for women was a home like birthing setting while for their partners this was the possibility of pain relief (8).

Remarkably, research into women’s expectation of pain during birth and preference for pain management was limited to one study until 2010. In 1988 Senden (18) compared Dutch and American women who gave birth during daytime in two hospital universities. Expectations of pain and preferences in pain relief were asked within two days after birth. It was concluded that the difference in expected pain and the difference in received pain relief could be attributed to fundamental, culturally determined differences between the two societies with respect to women’s views of pain during labour.

In 2010 Christiaens (5) compared Dutch and Belgian women regarding their expectation of labour pain in relation to received pain relief. She found that before birth Dutch and Belgian women had a similar labour pain acceptance. However, Dutch women were six times less likely to use pain medication during labour. For both Dutch and Belgian women their attitude towards labour pain predicted the use of pain relief. However, for Dutch women, having personal control of pain relief predicted an even lower use of pain medication whereas personal control was not a predicting factor in use of pain medication for Belgian women. Christiaens therefore concludes that the maternity care context is of major importance in further study of the management of labour pain.

Finally, Douma (29) conducted a randomised controlled trial comparing the analgesic efficacy of remifentanil with meperidine and fentanyl among women requesting analgesia other than epidural analgesia. It was concluded that Remifentanil PCA provided better analgesia than meperidine and fentanyl PCA, but only during the first hour of treatment. Furthermore, the overall satisfaction scores were higher with remifentanil.

Two qualitative studies addressed women’s expectations of prenatal and midwifery care. Luyben (13) compared the antenatal care needs of women in Switzerland, Scotland and the Netherlands. Women in different countries felt responsible for their own pregnancy and transition to motherhood. To fulfil this responsibility they expressed the need for antenatal caregivers to help them to feel confident and to respect their individual autonomy. Likewise, Seefat (32) found that Dutch low-risk pregnant women expected their midwives to oversee the transition period and to be capable of supporting them in dealing with changes in pregnancy and in preparing them for birth and motherhood. This would require attentive, proactive, professional psychosocial support.
from midwives. Finally, Hendrix showed that the most important attribute to women and their partners in obstetric care was the possibility to have influence on the decision making (8).

**Experiences with birth**

Themes that predominantly emerge when looking at experiences of women with birth and maternity care during birth are differences in experiences related to place of birth, experiences with referral, and cultural differences in women’s experiences with birth (table 2).

**Place of birth**

In 1990 Kleiverda (11) found no differences in experience and psychological well being between low risk nulliparous women who gave birth at home or voluntarily in hospital without referral. However, of the women who were not referred to specialist care in Wiegers’ study (33), both nulliparous and multiparous women with a planned home birth were more positive about the midwife, and the first-time mothers among them were also more positive about their postpartum period than those with a hospital birth. This was confirmed in the study of Borquez (2) in 2006 which found that women with a home-birth perceived less pain, desired less pain-relieving medication, believed they knew their midwife better and rated their birth setting higher compared to women who had a planned birth in a birth-centre. However, in that study women with a home birth were more often multiparous women and results were not corrected for parity.

In 2009, Christiaens (4) compared Dutch and Belgian women and found that in both countries women with a planned home birth were more satisfied compared to women with a hospital birth. These findings remained significant after adjusting for parity, age, and level of education and were true in every sub dimension of satisfaction (i.e. general satisfaction, satisfaction with self, with the baby, the midwife and the partner).

Rijnders (16) (this thesis) showed that not having had a homebirth was also a predicting factor for negative recall of birth three years after birth even after correction for mode of birth, referral, fear during birth for the baby or self, not having had a choice in pain relief, not being satisfied in coping with pain and en giving a negative description of the caregivers.

Finally, in a qualitative study by Johnston (9) fourteen women were interviewed to investigate the meaning of childbirth for women who gave birth at home. These women expressed satisfaction with having given birth in a calm, comfortable environment with a supportive caregiver, and expressed satisfying feelings of empowerment and control of their bodies and birthing experience.
Referral

However, if complications arise and referral is needed this is likely to affect women’s experiences with birth. Pop (31) concluded in 1995 that a hospital birth and/or obstetric factors were not related to occurrence of blues and depression in the early puerperium. Nevertheless, referral during labour was associated with a more negative experience with birth on the short term for nulliparous women (11) and for both Dutch and Belgium women (3). It was also related to negative birth experiences in the long term (16). However, the study of Wiegers (22) showed that, although referral led to more negative experiences compared to no referral, no difference in the experience of the birth, the midwife, or the post-partum period was found between those referred after a planned hospital birth and those referred after a planned home birth. Wiegers concluded that although the latter group also had an unplanned transfer to hospital, this indicated that the unplanned transfer by itself had little influence on the women’s evaluation of birth.

In 2006 Wiegers (24) introduced the principles of the Consumer Quality Index to measure women’s experience with maternity care. She argued that “client satisfaction is only indirectly related to the quality of the health care system, because it is strongly coloured by expectations and prior experiences. Users tend to value what is available and known to them more than what is new and unexpected. Because satisfaction with care is generally high, regardless of the quality of the care provided (…..) the input of clients in the quality of care discussion has been shifted from client satisfaction to client experience, that is: to the assessment of health care quality from the patient's perspective”. She found that women regardless of parity and even if the majority of them (59%) experienced at least once referral from one care provider to another, were very positive about the quality of the maternity care they received. However, with regard to the care during labour and birth, the quality of care scores was higher when women knew their care provider, when they gave birth at home, when they gave birth in primary care and when they were assisted by their own midwife.

Satisfaction with birth

In 2007 Christiaens (26) was the first to study prospectively the influence of expectations about childbirth, labour pain, personal control and self-efficacy on satisfaction with childbirth. Satisfaction is a multidimensional concept, influenced by a variety of factors and women can be satisfied with some aspects of childbirth and dissatisfied with others (34). The four main determinants of childbirth satisfaction are labour pain (35-37), personal control (37;38) self-efficacy (39) and expectations for labour and birth (35-37). Christiaens concluded that for both Dutch and Belgian women satisfaction with childbirth was most dependent on the fulfilment of expectations. The
experience of personal control buffered the negative impact of labour pain and women with high self-efficacy showed more satisfaction with self-, midwife- and physician-related aspects of the birth experience.

Cross-national comparisons
Cross-national comparisons show that Dutch women are less satisfied compared to women in Belgium and the United Kingdom. In Christiaens’ study (26) fulfilment of expectations was equally important to childbirth satisfaction of both Dutch and Belgian women but Belgian women's expectations were more easily fulfilled than Dutch women's expectations. It is likely that Belgian women's expectations differed from Dutch women’s expectations given the diverging maternity care systems. According to Christiaens the high referral rate and the ambivalent Dutch maternity care, with its “two sciences of maternity care” might explain the unfulfilled Dutch expectations.

For women in the United Kingdom and the Netherlands common factors that contributed to a negative appraisal of birth were an unplanned operative birth, negative description of the caregivers, having had fear for the baby's life and having had major health problems since the birth. In addition, for Dutch women, induction of labour, being a primigravida and feeling that her own life had been in danger, were also important factors. Also in this study more Dutch women than English women were found to be negative when they looked back on their birth three years later. Baston (1) (this thesis) rightfully cautions for the interpretation of these results “in view of the potential differences in the way that women from different cultures interpret the questions and their response options”. Referral, as determining factor that might have explained differences in appraisal of birth between the two countries was not included in the analysis as this variable was not available in the UK dataset.

Birth in a specific context
Two studies looked into the experience with birth within a specific context. Van der Hulst (19) described women’s experience with birth after sexual abuse and Molkenboer (14) addressed experiences with different modes of breech birth.
Low-risk women with a history of sexual abuse did not appear to have more problems during labour and birth than other women. However, multiparous women with a history of sexual abuse reported more emotional distress and were more likely to suffer pelvic pain. On the other hand, sexually abused women also reported higher levels of autonomy and felt more responsible for their own health in comparison to the non-abused women. These unexpected findings were cautiously explained by a tendency of sexually abused women to prefer to be alone, thus gaining a greater perceived internal control.
Two years after their breech birth, significant more women who had undergone a vaginal birth compared to women who had a caesarean section stated that they liked having experienced labour, liked that childbirth was natural and liked actively participating in the birth, whereas they disliked that the birth experience was very painful, and felt more worried about the health of their baby at the time of delivery. In the planned caesarean group, significantly more women felt reassured about their baby’s health and reported more involvement in decision-making.

**Aspects of maternity care**

Four studies looked more specifically into women’s experience in relation to aspects of maternity care.

In 1994 Kerssens (30) looked at how women had experienced accessibility and quality of maternity home care assistance during birth and in the post partum period. It was concluded that maternity home care assistance was not sufficiently accessible but was of good quality. All four investigated functions of the assistant’s expertise (assistance of midwife during home birth, care for mother and baby, provision of infant health education to the family, and performance of household services) were rated as very satisfactory by women.

Fontein (7) looked at birth outcomes and women’s experiences with care comparing practices with a maximum of two midwives with practices with more than two midwives. Women who had received care in these smaller midwifery practices were significantly more likely to experience lower rates of referral, fewer interventions in general and specifically for pain relief and fewer unplanned caesarean sections. They were also significantly more likely to know their midwife, were more frequently supported by their own midwife after referral and had higher levels of a positive birth experience compared to women in practices with more than two midwives.

Vandenbussche (21) looked at differences in the valuation of birth outcomes among pregnant women, mothers, and obstetricians, and assessed how these would affect a particular obstetric decision. Contrary to nearly all of the pregnant women and mothers, obstetricians tended to view permanent neurological handicap as a worse outcome than neonatal death. Furthermore, obstetricians tended to prefer instrumental vaginal delivery to caesarean section, whereas pregnant women and mothers had no clear preference between these methods. Third, obstetricians differed more among themselves in the values attached to specific outcomes than either mothers or pregnant women. The authors concluded that this implied that the values of an individual woman were more likely to correspond with the average views of pregnant women than with the values of an individual obstetrician.
De Jonge (27) conducted a qualitative study to gain insight in influences on women’s use of birthing positions, and into the labour experiences of women in relation to the birthing positions they used. Women, regardless of ethnicity, were most familiar with the supine position. Being encouraged to find the most suitable positions was described as part of having control over labour, which contributed to a good experience and good emotional well-being afterwards for some women. The experience of type and intensity of pain and the accompanying preference for a certain birthing position varied widely. Women expected midwives to provide professional advice on positions and this advice was a stronger influence than their personal preference. De Jonge concludes that midwives should empower women to find the positions that are most suitable for them, by giving practical advice during pregnancy and labour.

Experiences with interventions in pregnancy in a low risk population

Only recently three studies have been conducted that looked at women’s expectations and experiences with interventions during pregnancy (table 3). De Miranda (6) studied the effect of sweeping membranes to prevent post term pregnancy. Most women were positive about the intervention but one third considered it painful. However, the majority of those indicated that they were willing to undergo the same treatment in a subsequent pregnancy.

In 2008 Kok (12) looked at preferences of expectant parents with a term foetus in breech position for either planned vaginal delivery or planned caesarean birth. These parents indicated a preference for a caesarean delivery. The mother’s preference for mode of delivery was mostly influenced by a change in 2-year neonatal outcome, whereas maternal outcome was only of minor importance. In contrast, the father’s preference was mostly influenced by the maternal outcome. Rijnders (17) (this dissertation) looked at the experiences of women with external cephalic version (ECV). It was found that most women rated ECV as a good experience and the majority was willing to undergo a version in a subsequent pregnancy. Significant pain during the version was experienced by one third of the women. Women with a more negative experience were those who more likely had experienced pain, a lot of pain, or extreme pain or fear during the version.

Conclusion

Research into women’s expectations, preferences and experiences within Dutch maternity care has been limited. The available research has been focused primarily on preference for and experience with place of birth and women’s birthing experiences
after referral. A strong preference for and good experiences with home birth has been
demonstrated. Referral is associated with more negative birthing experiences but
referral from home to hospital seems not more unfavourable compared to referral within
a hospital setting. However, although referral is the main intervention in primary care, it
is still unknown why women have a more negative experience after referral and
subsequently which factors in the process of referral can be improved to lead to a better
birth experience.
Furthermore, it is remarkable to see that research into the expectations, preferences and
experiences with labour pain and pain relief has never led to any international
publication by a Dutch researcher. In the light of the internationally divergent Dutch
policy in pain management this can only be interpreted as an omission.
Third, several studies looking at different topics addressed the importance of involving
women in decision making and of giving them support. However, it is unknown if and
how such an important approach has been implemented in maternity care. Finally, only
a few studies were found that addressed interventions in primary midwifery care.
Fortunately, these studies were not restricted to perinatal outcomes only but did also
address women’s preferences and/or experiences. It can be concluded from the available
literature that, to understand what women expect, want and how they experience Dutch
maternity care, a lot still has to be done in Dutch midwifery and obstetric science.
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<tr>
<th>author</th>
<th>Theme</th>
<th>Population</th>
<th>Method</th>
<th>Findings</th>
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<tbody>
<tr>
<td>Senden 1988 (18)</td>
<td>Expectations of labour pain and management Comparison USA Netherlands</td>
<td>346 women who gave birth during daytime in 2 university hospitals</td>
<td>Questionnaire within 2 days after birth</td>
<td>American women expected birth to be more painful compared to Dutch women and subsequently received more pain relief. Groups differed not in difference between expected and experienced labour pain.</td>
</tr>
<tr>
<td>Kleiverda 1990 (10)</td>
<td>Preference for place of birth</td>
<td>170 low risk nulliparous women</td>
<td>Interviews at 18 weeks gestation</td>
<td>Strongest predictors: Educational level, psychological well-being, anxiety concerning complications at birth, and attitudes towards female social roles accounted</td>
</tr>
<tr>
<td>Wiegers 1998 (23)</td>
<td>Preference for place of birth Determinants for choice</td>
<td>1720 low risk women</td>
<td>Postal questionnaire at 36 weeks gestation</td>
<td>Strongest predictors: Social factors, the confidence of significant others in home birth and the expectations of hospital care during childbirth.</td>
</tr>
<tr>
<td>Luijben 2005 (13)</td>
<td>Women's needs from antenatal care Comparison Netherlands, Switzerland and UK</td>
<td>24 women</td>
<td>Interviews between 11 and 36 weeks</td>
<td>To be able to bear the responsibility of becoming a mother is the main reason why women seek antenatal care. To achieve this aim they needed to feel confident and to feel that their individual autonomy would be respected</td>
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<tr>
<td>Van der Hulst 2007 (20)</td>
<td>Relation between women’s attitude towards place of birth and subsequent interventions</td>
<td>625 low-risk pregnant women</td>
<td>Special designed questionnaire between 20-24 weeks gestation</td>
<td>A large proportion of women desire a home birth. Attitudes toward obstetric technology are an important predictor with respect to intended place of delivery. Women who opt for a home delivery are less likely to be referred</td>
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<td>Pavlova 2009 (15)</td>
<td>Preference for place of birth</td>
<td>78 nulliparous women</td>
<td>Discrete choice experiment 8 profiles in a questionnaire in presence of researcher</td>
<td>Women have a preference for a domestic birth setting and possibility of pain relief</td>
</tr>
<tr>
<td>Seeffat-van Teeffelen 2009 (32)</td>
<td>preferences in support from midwives</td>
<td>21 low-risk pregnant women</td>
<td>qualitative study 3 focus-group interviews</td>
<td>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.</td>
</tr>
<tr>
<td>Hendrix 2010 (28)</td>
<td>Place of birth Willingness to participate in RCT</td>
<td>107 low risk nulliparous women who had declined participation</td>
<td>questionnaire</td>
<td>women refused participation because they had already chosen their place of birth at 12 weeks gestation women strongly value their autonomy of choice</td>
</tr>
<tr>
<td>Hendrix 2010 (8)</td>
<td>Preference in obstetric care of women and partners</td>
<td>321 nulliparous women and 212 partners</td>
<td>Discrete choice experiment 8 profiles Postal questionnaire</td>
<td>Most important preference for women: home like birth setting. Most important for partner: possibility pain relief treatment</td>
</tr>
<tr>
<td>Christiaens 2010 (5)</td>
<td>pain acceptance and personal control in pain relief</td>
<td>327 women having a hospital birth without obstetric intervention</td>
<td>Questionnaire at 30 weeks and within 2 weeks postpartum Personal control in pain relief measured with the Personal Control in Pain Relief Scale, by McCrea and Wright</td>
<td>Dutch and Belgian women have a similar labour pain acceptance. Dutch women are 6 times less likely to use pain medication during labour Dutch women: the use of pain medication is lowest if women experience control over the reception of pain medication and have a positive attitude towards labour pain Belgian women: negative attitudes towards labour predicts the use of pain medication, but not personal control over the use of pain relief</td>
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Table 2: Identified studies addressing Dutch women’s experiences with birth (n=17)

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<tr>
<th>Author</th>
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<tbody>
<tr>
<td>Kleiverda 1990</td>
<td>place of birth and referral</td>
<td>170 nulliparous women</td>
<td>Interviews 10 days and 6 weeks post partum.</td>
<td>No differences in outcomes between home birth and birth in hospital without referral. Post partum well being strongly related to well being start pregnancy and less to experiences with birth.</td>
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<tr>
<td>Kerssens 1994</td>
<td>maternity home care assistance (“kraamzorg”) during birth</td>
<td>A total of 1812 women who “recently” gave birth</td>
<td>postal questionnaire after birth VAS scales for accessibility and quality of different aspects of care</td>
<td>Almost one-third of the new mothers rated the availability as inadequate assistant's expertise was rated positively.</td>
</tr>
<tr>
<td>Pop 1995</td>
<td>mood disturbances during the early puerperium comparison between home and hospital birth</td>
<td>293 women</td>
<td>4 weeks after birth. Blues defined with Pitt's criteria, depression with Research Diagnostic Criteria</td>
<td>No difference in the incidence of blues and depression between women who gave birth at home and those who gave birth in hospital. Obstetric factors were not related to the occurrence of blues or depression in the early puerperium.</td>
</tr>
<tr>
<td>Wiegers 1996</td>
<td>referral during birth</td>
<td>1640 low risk women</td>
<td>Postal questionnaire at 36 weeks gestation and 3 weeks after birth</td>
<td>an unplanned transfer from a planned home birth to hospital has little influence on the experience of childbirth.</td>
</tr>
<tr>
<td>Vanden-bussche 1999 (21)</td>
<td>Valuation of birth outcomes Differences between obstetricians, pregnant women and mothers</td>
<td>12 obstetricians, 15 low risk pregnant women between 33 and 38 weeks gestation, 15 mothers</td>
<td>Cost-utility decision analysis, using standard reference gamble and decision tree analysis</td>
<td>Obstetricians tend to view permanent neurological disability as a worse outcome than neonatal death. Compared to women, obstetricians overestimate the burden caused by caesarean delivery. Obstetricians differed more among themselves than women.</td>
</tr>
<tr>
<td>De Jonge 2004</td>
<td>Birthing position</td>
<td>Experience of 20 women who started the second stage of labour under the care of the midwife</td>
<td>Qualitative study interviews between 7 and 19 weeks after birth</td>
<td>Choice of birthing positions was determined more by midwives’ advice than by women’s personal preferences. Midwives should empower women to find the positions that are most suitable for them, by giving practical advice during pregnancy and labour.</td>
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<td>Author</td>
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<tr>
<td>Vd Hulst 2006 (19)</td>
<td>Birth experience after sexual abuse</td>
<td>Experience of 625 low risk women</td>
<td>Questionnaire at 20-24 weeks gestation Psychological characteristics with the General Health Questionnaire Locus of control with Multidimensional Health Locus of Control Scale Autonomy with the 12-item Autonomy Questionnaire.</td>
<td>Sexually-abused women reported higher levels of autonomy Sexually-abused multiparous women reported more emotional distress, more internal beliefs concerning health and were more likely to suffer pelvic pain Sexually-abused low-risk women do not seem to have more problems during labour and birth than other women</td>
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<td>Borquez 2006 (2)</td>
<td>home birth compared to birth centre</td>
<td>193 women giving birth at home or in a birthing centre without complications</td>
<td>postal questionnaires 1-6 months after birth</td>
<td>home-birth group perceived less pain, desired less pain-relieving medication, believed they knew their midwife better and rated their birth setting 'higher' than the birth-centre group The birth-centre group emphasised safety, having medical help available, and convenience, The home-birth group emphasised the home being trustworthy and dependable, having their own place and belongings, and feeling comfortable and relaxed.</td>
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<tr>
<td>Christiaens 2007 (26)</td>
<td>childbirth experience</td>
<td>560 women</td>
<td>Questionnaire at 30 weeks and within 2 weeks postpartum Mackey Satisfaction with Childbirth Rating Scale, Labour pain rated retrospectively with Visual Analogue Scales. Personal control with the Wijma Delivery Expectancy/Experience Questionnaire and Pearlin and Schooler's mastery scale.</td>
<td>Satisfaction with childbirth benefited most consistently from the fulfilment of expectations. The experience of personal control buffered the lowering impact of labour pain. Women with high self-efficacy showed more satisfaction with self-, midwife- and physician-related aspects of the birth experience</td>
</tr>
<tr>
<td>Christiaens 2007 (3)</td>
<td>Referral during birth;</td>
<td>563 women</td>
<td>Questionnaire at 30 weeks and within 2 weeks postpartum Satisfaction with Mackey Satisfaction Childbirth Rating Scale</td>
<td>After referral: women with planned home birth less satisfied than women with a planned hospital birth and Dutch women less satisfied then Belgium women.</td>
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<tr>
<td>Johnson 2007 (9)</td>
<td>Experience with home birth</td>
<td>14 women who had given birth at home</td>
<td>Qualitative study interviews</td>
<td>Dutch women who gave birth at home felt fulfilled and empowered by the experience.</td>
</tr>
<tr>
<td>Rijnders 2008 (16) (this dissertation)</td>
<td>Experience with childbirth</td>
<td>1309 women</td>
<td>postnatal questionnaires three years after birth Questionnaire Greater Expectations follow up study, including EPDS, Rosenberg’s self esteem</td>
<td>16.5% negative recall of birth. Perinatal factors associated with negative recall: having had an assisted vaginal delivery or unplanned caesarean delivery, no home birth, referral during labour, not having had a choice in pain relief, not being satisfied in coping with pain, a negative description of the caregivers, having had fear for the baby's life or own life</td>
</tr>
<tr>
<td>Baston 2008 (1) (this dissertation)</td>
<td>Experience with childbirth</td>
<td>738 UK women 1309 Dutch women</td>
<td>postnatal questionnaires three years after birth questionnaire Greater expectations follow up study, including EPDS, Rosenberg’s self esteem</td>
<td>Dutch women more negative compared to English women Common factors that contributed to a negative appraisal of birth: unplanned operative birth, negative description of the caregivers, having had fear for the baby's life and having had major health problems since the birth</td>
</tr>
<tr>
<td>Molkenboer 2008 (14)</td>
<td>Experience with vaginal birth versus caesarean section for term breech birth</td>
<td>183 women</td>
<td>Postal questionnaire two years after birth</td>
<td>More women in the planned vaginal birth group recalled having been worried about their child's health at the time of delivery, experienced more pain than expected, and reported less involvement in decision-making.</td>
</tr>
<tr>
<td>Wiegers 2009 (24)</td>
<td>Experience with quality of maternity care</td>
<td>793 Pregnant women</td>
<td>Postal questionnaire to develop the 'Consumer Quality Index': informative questions (what happened?) evaluative questions (how often did you experience) general ratings (1-10)</td>
<td>Women, regardless of parity, were very positive about the quality of the maternity care they received. For care during labour and birth the quality of care scores are higher when women know their care provider, when they give birth at home, when they give birth in primary care and when they are assisted by their own midwife.</td>
</tr>
<tr>
<td>Author</td>
<td>Theme</td>
<td>Population</td>
<td>Method</td>
<td>Findings</td>
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<tr>
<td>Christiaens 2009 (4)</td>
<td>Experience with place of birth</td>
<td>580 women</td>
<td>Questionnaire at 30 weeks and within 2 weeks postpartum</td>
<td>Women with planned a home birth are most satisfied in both countries.</td>
</tr>
<tr>
<td></td>
<td>Comparison Netherlands or Belgium</td>
<td></td>
<td>Satisfaction with Mackey Satisfaction with Childbirth Rating Scale</td>
<td>Belgian women are more satisfied than Dutch women for both home and hospital births.</td>
</tr>
<tr>
<td>Douma 2010 (29)</td>
<td>comparison of patient-controlled meperidine, remifentanil, and fentanyl in labour</td>
<td>RCT 159 women requesting analgesia other than epidural analgesia</td>
<td>Two hours after delivery, pain and satisfaction on a 10-point VAS scale</td>
<td>Remifentanil PCA provided better analgesia than meperidine and fentanyl PCA, but only during the first hour of treatment. In all groups, pain scores returned to pre-treatment values within 3 hours after the initiation of treatment. Overall satisfaction scores were higher with remifentanil, but remifentanil produced more sedation and itching.</td>
</tr>
<tr>
<td>Fontein 2010 (7)</td>
<td>Birth experiences in different sized midwifery practices.</td>
<td>718 low-risk women</td>
<td>postal questionnaires six weeks after the estimated due date experiences of women were recorded on a Numerical Descriptor Scale questionnaire was predominantly based on questionnaires from Winters et al., the Mason Survey, van Teijlingen et al., PLDS, W-DEQ, CWS and EPDS.</td>
<td>In midwifery practices consisting of 1 or 2 midwives: compared to more than 2 midwives: less referrals fewer medical interventions during birth compared to women in practices higher levels of satisfaction with the birth experience more often knew their midwife after referral.</td>
</tr>
</tbody>
</table>
Table 3: Identified studies addressing Dutch women’s expectations or experiences with interventions in pregnancy (n=3)

<table>
<thead>
<tr>
<th>Author</th>
<th>Theme</th>
<th>Population</th>
<th>Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>deMiranda 2006</td>
<td>Sweeping membranes for near post term pregnancy</td>
<td>750 low risk women</td>
<td>Woman’s satisfaction by self-reported questionnaires after birth</td>
<td>88% indicated that they would choose membrane sweeping in a next pregnancy. Even among the 239 women who described sweeping as painful, 88% would choose membrane sweeping again in the next pregnancy.</td>
</tr>
<tr>
<td>Kok 2008 (12)</td>
<td>Parents preferences external cephalic version</td>
<td>40 women with and 40 women without breech presentation at term and 27 partners</td>
<td>Interviews after 36 weeks gestation with treatment preferences and outcome trade-offs scenario’s</td>
<td>65% of the patients preferred Caesarean birth for breech presentation</td>
</tr>
<tr>
<td>Rijnders 2010</td>
<td>Experiences ECV</td>
<td>137 women with confirmed breech</td>
<td>Questionnaire after ECV</td>
<td>Women rated ECV as a good experience and the majority was willing to undergo a version in a subsequent pregnancy. Significant pain during the version was experienced by one third of the women</td>
</tr>
</tbody>
</table>
Reference List


(13) Luyben AG, Fleming VE. Women's needs from antenatal care in three European countries. Midwifery 2005 Sep;21(3):212-23.


