

To give birth in late- and post-term pregnancy - Women's experiences and perspectives

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”There were days and deliveries where I couldn’t believe it either, but this was and will always be the most commonplace of miracles. An event at once familiar and phenomenal, timeless and immediate. Briefly making angels of us all.”

Jenny in *Call the Midwife*
(Thomas, 2012)

ABSTRACT

Childbirth is a lifechanging event, and women carry with them the experience throughout life. Around one in five pregnancies reach gestational week 41. When to recommend induction of labour for those extending 41 gestational weeks has been debated. Also, knowledge of women's experiences and perspectives is limited. Therefore, the **overall aim** of this thesis was to obtain a deeper understanding of women's experiences and perspectives of giving birth in late- and post-term pregnancy.

Study I is a systematic review aiming to identify and present validated instruments measuring women's childbirth experiences. In total, 36 instruments were identified representing different aspects of childbirth experiences with varying quality of psychometric properties. **Study II** compared childbirth experience between women randomised to either induction in gestational week 41+0 to 41+2 or to expectant management until gestational week 42. In total, 656 women responded to the Childbirth Experience Questionnaire version 2, three months after birth. As an exploratory outcome, 1457 women responded to the overall childbirth experience measured on a visual analogue scale within three days after birth. No significant difference was seen between the two randomised groups. **Study III** is a phenomenological study where twelve women were interviewed about their experience of induction of labour in late- and post-term pregnancy. The essence was described as the induction of labour becoming another journey than the intended one. In **Study IV**, ten women who wanted to await spontaneous onset in week 41 were interviewed about their experiences and perspectives regarding giving birth in late-term pregnancy. Through reflexive thematic analysis, three main themes were identified: well-being and trust in the own body's process, not for me right now – if everything is good, and the embodied experience of giving birth.

This thesis provides new insights into how induction of labour can be experienced in late- and post-term pregnancy as well as the experience of wanting to await spontaneous onset of labour. The included studies can aid maternity personnel in acquiring a deeper understanding and enable more individualised care in the lifechanging and existential period that giving birth and becoming a parent is.

Keywords: childbirth experience, late-term pregnancy, post-term pregnancy, induction of labour, systematic review, validated questionnaire, randomised controlled trial, phenomenology, thematic analysis

SAMMANFATTNING PÅ SVENSKA

Att föda barn i graviditetsvecka 41 och 42 – Kvinnors erfarenheter och perspektiv

Erfarenheten av graviditet och förlossning är stora livshändelser som kvinnor bär med sig genom hela livet. Ungefär en av fem graviditeter når graviditetsvecka 41. Det är omdebatterat när bästa tidpunkten är för induktion av förlossning för graviditeter som varar längre än vecka 41+0. Utöver det så finns det begränsat med kunskap om kvinnors upplevelser och perspektiv. Därför är det övergripande syftet för denna avhandling att få en djupare kunskap om kvinnors erfarenheter och perspektiv av att föda barn i graviditetsvecka 41 och 42.

Studie I är en systematisk litteraturstudie med syfte att identifiera och presentera validerade instrument som mäter kvinnors förlossningsupplevelser. Totalt identifierades 36 instrument, vilka representerar olika aspekter av förlossningsupplevelsen och med varierande kvalitet på psykometriska egenskaper. I Studie II jämfördes förlossningsupplevelsen mellan kvinnor som randomiserades till antingen induktion av förlossning i vecka 41+0 till 41+2 eller till avvaktande handläggning till vecka 42+0. Totalt besvarade 656 kvinnor på enkäten, Childbirth Experience Questionnaire version 2, tre månader efter förlossning. Utöver det, svarade 1457 kvinnor på en övergripande fråga om sin förlossningsupplevelse på en skala mellan 1-10. Ingen signifikant skillnad sågs mellan grupperna. Studie III är en fenomenologisk studie där tolv kvinnor intervjuats om sin erfarenhet av induktion av förlossning i graviditetsvecka 41 och 42. Essensen beskrev hur induktion av förlossningen blev en annan resa än den förväntade. I Studie IV intervjuades tio kvinnor, som önskade avvakta med induktion i vecka 41, om sina upplevelser och perspektiv av att vilja invänta spontan förlossningsstart. Genom reflektiv tematisk analys identifierades tre huvudteman; välmående och förtroende i kroppens egen process, inte för mig just nu – om allt är bra och en förkroppsligad erfarenhet av att föda.

Denna avhandling ger ny kunskap om hur induktion av förlossning kan upplevas i graviditetsvecka 41 och 42 samt om upplevelsen av att önska invänta spontan förlossningsstart i graviditetsvecka 41. De inkluderade studierna kan bidra med kunskap till mödrahälso- och förlossningsvården och möjliggöra en mer individualiserad vård i den livsomvälvande period som det är föda barn och bli förälder.

LIST OF PAPERS

This thesis is based on the following studies, referred to in the text by their Roman numerals.

- I. Nilvér H, Begley C, Berg M. Measuring women's childbirth experiences: a systematic review for identification and analysis of validated instruments. *BMC Pregnancy Childbirth*. 2017 Jun 29;17(1):203.
- II. Nilvér H, Wessberg A, Dencker A, Hagberg H, Wennerholm UB, Fadl H, Wesström J, Sengpiel V, Lundgren I, Bergh C, Wikström AK, Saltvedt S, Elden H. Women's childbirth experiences in the Swedish Post-term Induction Study (SWEPIS): a multicentre, randomised, controlled trial. *BMJ Open*. 2021 Apr 7;11(4):e042340.
- III. Nilvér H, Lundgren I, Elden H, Dencker A. Women's lived experiences of induction of labour in late- and post-term pregnancy within the Swedish post-term induction study – a phenomenological study. *International Journal of Qualitative Studies on Health and Well-being* 2022 Apr 17:1.
- IV. Nilvér H, Lundgren L, Dencker A. The experiences and perspectives of pregnancy and birth in women who wish to await spontaneous onset of labour in late-term pregnancy – a qualitative interview study. *In manuscript*.

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PREFACE

I'm a mother of two. Often, it is not advised to do research close to your individual experiences, as all your previous experiences will affect your preunderstanding. I carry with me the experiences of when my children were born. It made me question whether I could actually become a midwife, which had been a dream following me for a long time. Is it possible to become a midwife if you have a fear of childbirth? However, it turned out just fine. When in a clinical situation, you adopt and become a professional. When at work, it is all about that individual woman giving birth – just as in the interview situation, or when analysing data, it is all about the experiences of the women that have participated. It has become clear to me that in both my work as a clinical midwife, as well as my research, guarding women's right to have positive and empowering birth experiences is my number one priority.

In accordance with the International Confederation of Midwives¹, the experience of pregnancy and childbirth is seen as profound and significant, where the midwife is to protect and support women's human, reproductive and sexual health and rights.

I hope for this thesis to add to our understanding of the complexity of the individual woman's childbirth experience. It is not foremost a medical event to give birth; it has a bigger meaning, as the birth of a new child will forever transform the life of the childbearing woman and her family.

Helena Nilvér
Möln dal
May 2022



ABBREVIATIONS

| | |
|--------|---|
| ICM | International Confederation of Midwives |
| SWEPIS | SWEdish Post-term Induction Study |
| WHO | World Health Organization |
| VAS | Visual Analogue Scale |
| CEQ | Childbirth Experience Questionnaire |
| CEQ2 | Childbirth Experience Questionnaire version 2 |

DEFINITIONS IN SHORT

| | |
|----------------------------|--|
| Induction of labour | An artificial start of labour with mechanical or pharmacological methods. |
| Intervention in childbirth | An action taken that intervene with the physiological process of pregnancy and/or labour. |
| Late-term pregnancy | Pregnancy lasting between gestational week 41 plus 0 to 6 days (41+0 to 41+6). |
| Post-term pregnancy | Pregnancy extending gestational week 42. |
| Term pregnancy | Pregnancy lasting between gestational week 37 plus 0 days (37+0) up to gestational week 41 plus 6 days (41+6). |
| Woman | In this thesis, woman refers to the biological gender of pregnant persons and persons giving birth. Although not all persons giving birth identify themselves as female, the term woman is not meant to exclude anyone but used with respect for all childbearing people no matter how they identify themselves. |
| Woman-centred care | Individualised care in pregnancy and childbirth where the woman is involved in and has control over her care. It includes the needs of the baby and partner and addresses social, emotional, physical, psychological, spiritual and cultural needs and expectations. |

1 INTRODUCTION

This thesis focuses on women's experiences and perspectives of childbirth and induction of labour in late- and post-term pregnancies. The experience of childbirth and becoming a mother is a critically important and paradoxical life event. The childbirth experience holds more than it being positive, negative, or just the outcome of labour. The World Health Organization (WHO)² has declared a positive childbirth experience as a significant end point for women giving birth.

In order to understand the research area, the introduction section will address the complexity of women's childbirth experiences. To recognise the impact that interventions, such as induction of labour, have on the childbirth process, the physiology of birth will thereafter be described, as well as midwife's role. Afterwards, late- and post-term pregnancy will be addressed, as will induction of labour, to emphasise the research and recommendations.

1.1 WOMEN'S CHILDBIRTH EXPERIENCES

Childbirth has been described as an unavoidable situation for pregnant women³. How women experience their childbirth is important. Childbirth experiences are individual, complex life events that are related to the outcome for the mother and child^{3,4} and leave long-lasting impressions, as women tend to remember their childbirth experiences well⁵⁻⁷. It has been shown in previous studies that women's childbirth experiences can change and vary with time and be remembered more negatively or more positively, though remembered clearly^{7,8}.

Childbirth has been described as being as much a psychological journey as a physical one⁹. Interpreted through the lens of existential psychology, childbirth could be seen as an existentially changing event where values and meaning of life are reconsidered¹⁰. The existential characteristics of parenthood transition have been related to the meaning of life. Parenthood can be a turning point regarding what to hold sacred. It becomes vivid how the meaning of life both changes and becomes surprisingly clear. It is described how the parenthood transition impacts on sense of self, relationships, and the sense of being in the world¹¹. It has also been described how there seems to be more to childbirth than what is known and visible. It is not an everyday experience and needs to be treated with deep respect by midwives and health care personnel¹². There is

a specific mood or atmosphere surrounding birth¹³. However, joy and sacredness as a phenomenon in and around birth might be disturbed or forgotten due to technology and medicalisation¹⁴.

A negative or traumatic childbirth experience can result in future fear of vaginal birth¹⁵⁻¹⁷, postpartum depression¹⁸, and post-traumatic stress disorder¹⁹, and may have long-term negative repercussions on self-identity and relationships²⁰. Women have described their traumatic childbirth experiences as related to lack and loss of control, communication issues, and insufficient practical and emotional support²¹. Experiencing a traumatic birth has been described as being disconnected, helpless and isolated during birth due to a fractured relationship with caregivers²². For multiparous women with fear of childbirth, previous negative birth experiences are central to their fear and are specifically related to pain and negative experiences with the maternity personnel^{15,17}. Women's experiences from a previous labour and birth can also change women's preferences for mode of delivery in a future birth²³. For women with fear of childbirth, it is more common with caesarean section, longer births and waiting longer for a subsequent pregnancy²⁴.

A positive birthing experience can contribute to strengthening a woman and can be remembered as an empowering life event^{6,9}. Women have related their positive experiences to both internal factors, like their own ability and strength, and to external factors, like a trustful and respectful relationship²³. Women have reported that a safe environment and emotional strength are important factors for a positive experience²⁵. A safe and supporting environment enables women to gain control during birth²⁶ and to focus on techniques to manage birth. Women with positive experiences describe feelings of being in a flow, being engaged and participating, safe and grounded. It is described as an important happening in life, with women having felt pride in giving birth and being able to master the pain, as well having belief in their own capacity to give birth and knowledge about the birthing process - which enables control - and being part of decision-making²³. The journey through childbirth has been described as an empowering experience where women experience growth in personal strength, making them feel ready to meet the demands of a new-born and parenthood⁹. Women's positive birth experiences comply with the personal and socio-cultural hopes and expectations of each woman. Most women wish for a physiological birth, and if interventions are necessary, women still want to retain personal achievement and control through active decision-making. Safety and psychosocial well-being are equally important for women in childbirth²⁷.

1.2 PHYSIOLOGY OF BIRTH

Childbirth is a complex process with several different factors and hormones affecting the birth process. A physiological birth refers to a birth process without medical interventions where the woman births her baby without interventions that affect the physiological process of labour and birth⁹.

The exact factor that initiates the start of physiological labour is unknown. However, labour onset is thought to be triggered by an inflammatory process, hormonal, and mechanical factors. The cervix will soften and ripen during the end of pregnancy and early stages of labour²⁸. Prostaglandins are an important mediator in initiating the onset of birth, among other factors. It is common to use prostaglandins when inducing labour²⁹.

There are several important hormones included in the physiological birth process; one of the more important hormones is oxytocin. Endogenous oxytocin influences well-being and has, as well an essential role in mother-infant bonding and breastfeeding. Several factors influence the levels of endogenous oxytocin negatively during childbirth. Stress is one major factor, but medical intervention also affects endogenous oxytocin levels³⁰. For example, epidural analgesia lowers oxytocin levels, which can lead to longer labour³¹. Synthetic oxytocin does not cross the blood-brain barrier and therefore does not have the same effect on maternal behaviour as endogenous oxytocin does. It can also result in stronger and more painful contractions compared to endogenous oxytocin³².

Women have described physiological birth as an intense and transformative experience that can lead to growth in personal strength and self-empowerment⁹. The endogenous oxytocin released in physiological labour is linked to several maternal behaviours and feelings during childbirth and postpartum, optimising the process of labour and the transition to motherhood³³.

1.2.1 *Normal birth*

There is no consensus regarding the concept normal birth. However, normal birth has been defined by the International Confederation of Midwives (ICM)³⁴ as a term birth in vertex position that starts spontaneously and where the baby is born without any surgical, medical or pharmaceutical interventions. In Sweden, midwives are the primary care-givers during normal pregnancy and birth. If there is anything outside of what is considered normal, obstetricians are consulted and take over the responsibility if complications occur. However,

midwives are still involved in the care³⁵. Factors promoting normal birth are continuous support during labour, not having continuous electronic foetal monitoring during labour, being able to move freely throughout labour and good quality of care³⁶. Continuous support during labour and birth results in better satisfaction with care as well as fewer complications and thereby higher rates of normal births³⁷.

Midwives have an important role in supporting women's normal birth. The midwife's approach and care are of importance, as they can promote the birthing woman's inner strength and belief in her own capability to birth, making her feel safe and cared for³⁸. In the Lancet series of midwifery^{39,40}, the focus is of the needs of the woman, and how midwifery can support. The most scientifically important aspects to promote normal birth are preventative and supportive care, preferably given by a midwife. In general, when births don't go as planned, poor communication is involved^{39,40}. Supporting normal birth is therefore central within midwifery⁴¹.

1.2.2 *Interventions in childbirth*

When intervening in childbirth, it is important that the intervention is beneficial to the mother and baby. On the contrary, interventions that don't benefit them might risk being harmful in different ways⁴². The timing of the intervention is important. In the Lancet series of midwifery, the concept of 'too little, too late – too much, too soon' was coined. It refers to how often, in low-resource settings and countries, there is a risk that women don't get the care needed in time, with consequences for both mother and child. However, in middle-income settings and countries, it has become 'too much, too soon'. When interventions are given routinely and medical care is given on uncertain grounds, there is a risk of complications to mother and child, as all interventions come with pros and cons⁴³. In labour, when one intervention is given, there is a tendency for several to follow. This chain of interventions is often referred to as a cascade of interventions⁴⁴⁻⁴⁶.

Medicalisation of childbirth refers to when a biomedical or technocratic approach to childbirth tends to dominate the care given. Instead of the woman and her needs being the focus of care, the needs of the institution and routines are in focus. This leads to interventions to speed up and try to control the process of labour and birth^{47,48}. Women's expectations on childbirth have changed over time towards a more positive attitude towards medical interventions⁴⁹.

1.3 WOMAN-CENTRED CARE

Woman-centred care is a central concept in midwifery and has been stated as a fundamental philosophy for midwifery in the Lancet series of midwifery³⁹. The concept derives from the feminist health movement in the 1960s and 1970s. Women-centred care focuses on the individual woman's needs and expectations in pregnancy and childbirth, in which the woman makes decisions, is involved in and has control over her care and the relationship with the midwife and maternity personnel. The concept of woman-centred care includes the needs of the baby as well as the people and family around the woman defined of importance to her. It also has a holistic approach where social, emotional, physical, psychological, spiritual and cultural needs and expectations are addressed⁵⁰. There is variety in how the concept is interpreted, and a shared understanding is lacking. The biomedical models within maternity care have taken the focus away from woman-centred care and the needs of the individual woman. This indicates a growing need for midwives to assist women in navigating the information and care available for them⁵¹.

1.4 LATE- AND POST-TERM PREGNANCY

Traditionally, the first day of the last menstrual period has been used to estimate the length of pregnancy, and ten lunar or nine months has been considered normal pregnancy length⁵². Term pregnancy is defined as pregnancy lasting between 37 weeks and 0 days and 41 weeks and 6 days. Late-term pregnancy is defined as a pregnancy length of 41 gestational weeks plus 0 to 6 days. Post-term pregnancy is defined as a pregnancy reaching 42 gestational weeks or beyond^{53,54}. Pregnancy length estimated with ultrasound is considered to be the most appropriate and accurate way to determine a timespan in which the birth is most likely to occur. In Sweden, women are offered dating with ultrasound, and 97% of all pregnancies are dated with ultrasound⁵⁵.

The reasons why some pregnancies are post-term are unknown. Nevertheless, several risk factors have been observed. The main known risk factors are obesity, heredity, previous post-term pregnancy, first pregnancy and advanced maternal age, and a male foetus⁵⁶⁻⁶¹. There are several complications related to post-term birth. For the foetus, neonatal complications including increased risk of asphyxia, meconium aspiration syndrome, pneumonia, shoulder dystocia, umbilical cord complications and stillbirth⁶²⁻⁶⁴. Maternal complications associated with post-term delivery include prolonged labour, postpartum bleeding, puerperal infections, caesarean section, and cervical lacerations⁶⁴.

Post-term birth is also associated with longer-term difficulties with behavioural and emotional problems in early childhood, including attention-deficit and hyperactivity disorders^{65,66}, especially in children with foetal growth restriction⁶⁶.

Of women pregnant in gestational weeks 37 to 40, 0.12 percent had a stillbirth in Sweden during the period 2016-2020. Of women pregnant in or after gestational week 41, 0.13 percent had a stillbirth during that period. In total, 0.35 percent of births were stillbirths. The most common reasons for stillbirth in Sweden are intrauterine growth restriction and placental insufficiency⁵⁵.

Around 20% of all pregnancies in Sweden reach 41 gestational weeks, which equalled approximately 25 000 pregnancies annually in 2018 through 2020. The percentage of pregnancies reaching 42 gestational weeks has decreased from 7-8 percent to 3-4 percent in Sweden. This decrease in pregnancies reaching pregnancy week 42 is related to several regions changing their induction policy after the results of the Swedish Post-term Induction Study (SWEPIS) were published⁵⁵.

In Sweden, national guidelines recommend that women receive information about late-term pregnancy through their antenatal midwife. In the beginning of gestational week 41, women are to be offered either induction or a check-up with assessment of the health of mother and child followed by an individual plan. Women with risk factors are to be monitored more closely. Women with normal pregnancies without any risk factors are recommended to have given birth or to be in labour before week 42+0⁶⁷.

1.4.1 Women's experiences of late- and post-term pregnancy

There are only a few qualitative studies on women's experiences of late- and post-term pregnancy. These are from Sweden^{68,69}, Denmark⁷⁰ and Canada⁷¹. For women, a late-term or post-term pregnancy can be perceived as very demanding, as waiting for onset of labour can be mentally strenuous⁷⁰. This period of pregnancy has been described as being in a state of limbo. This state refers to a form of restlessness, where women are more easily influenced by feelings of insecurity of their body's ability to give birth. There is a large focus on the due date⁶⁸. For women with late- or post-term pregnancy, the pregnancy length is not per se a medical problem but can be perceived as an inconvenience due to prolonged physical discomfort and worry for family, friends, and care providers⁷¹. Women might need guidance from the midwife to regain trust in their body's ability to give birth⁶⁹.

1.5 INDUCTION OF LABOUR

The induction of labour means an artificial start of labour. First, the cervix needs to soften and start to dilate, followed by uterine contractions. There are different methods to induce labour, and which method to recommend depends on several factors, foremost the status of the cervix. With the help of Bishop Score, it is graded how prepared the cervix is for labour. A low score indicates a less favourable cervix, and a higher score indicates more favourable cervix. The methods used for induction include both mechanical and pharmacological procedures. If the cervix is dilated 1-2 cm, it is often possible to insert a balloon catheter into the cervix and provide pressure from the inside of the cervix, stimulating release of prostaglandins. Another mechanical method is membrane sweep, which is a method that aims to separate the membranes from the cervix and thereby stimulate the release of prostaglandins and pro-inflammatory cytokines. If the cervix has started to soften and dilate, it is common to do an amniotomy, which is an artificial rupture of the membranes. There are several pharmacological methods. Prostaglandins are used to start ripening the cervix and stimulating uterine contractions. Prostaglandins can be administered orally, intracervically or vaginally. Synthetic oxytocin is administered by intravenous infusion to start contractions and is normally used when the cervix is soft and has started to dilate⁷².

A Cochrane systematic review⁷³ has compared a policy of induction of labour at or beyond term with expectant management in pregnant women at or beyond term. The review found that a policy to induce a pregnancy continuing beyond term led to lower perinatal mortality and fewer caesarean births, although there were more assisted vaginal births. However, the timing of induction varied from 39 to 42 weeks of pregnancy, and expectant management exceeded 42 weeks of pregnancy in most of the studies. Keulen and Bruinsma⁷⁴ therefore conducted a review with a more narrowed timeframe with induction of labour at 41 weeks and 0-6 days compared with expectant management until 42 weeks and 0-6 days. They focused on evaluating perinatal mortality, meconium aspiration and caesarean section rate. There were not enough data to draw conclusions on meconium aspiration and perinatal death due to different timeframes and inclusion criteria. However, the caesarean section rate did not differ between the two timeframes. The researchers concluded that more research in this timeframe with an adequate sample size is needed to establish the optimal timing to induce late-term pregnancies⁷⁴. In a randomised multicentre study from the Netherlands, the authors compared induction in gestational week 41 (n=900) with expectant management until gestational week 42 (n=911). The results were in slight favour of the earlier induction group when comparing adverse perinatal outcome. However, the risks of

severe adverse perinatal outcome were low in both groups. No differences in operative vaginal delivery or caesarean section rates were observed⁷⁵. A meta-analysis by Alkmark et al.⁷⁶ of three randomised studies comparing induction at 41 gestational weeks with expectant management until 42 gestational weeks showed that induction at the beginning of gestational week 41 could lower perinatal death. However, it was uncertain how much it could be reduced. No difference was seen in the incidence of caesarean section between the two groups. However, in a systematic review by Rydahl et al.⁷⁷ comparing policy of induction in gestational week 41 with expectant management until 42 weeks in low-risk pregnancies, showed an association with an increase of caesarean section and uterus-rupture with a policy with induction in gestational week 41.

During recent decades, there has been an increase in induction of labour in the Nordic countries⁷⁸. In the years 2015-2020, induction of labour increased from 18 percent to 27 percent in Sweden. This can partially be explained by new guidelines where several regions in Sweden now offer and recommend induction in late-term pregnancy compared to a few years ago when most regions recommended induction at post-term pregnancy⁵⁵.

1.5.1 Women's experiences of induction of labour in late- and post-term pregnancy

When it comes to women's experiences and perspectives of induction of labour in late- and post-term pregnancy, some previous research has been done. A systematic review from 2018⁷⁹ identified eight qualitative studies looking at the experience of induction in post-term pregnancy from different perspectives. However, I have identified only one study that focuses solely on women's experiences in late- and post-term pregnancy. It is a recent study from Denmark⁸⁰.

Induction of labour can, in a late- or post-term pregnancy, be perceived as something to look forward to, as the end of pregnancy will finally be there⁷⁹. Women being booked for induction in post-term pregnancies have described how they needed to shift their expectations from their original birth plan and expectations of how the labour would start to a more clinical and medicalised one. It was perceived that the time for pregnancy had ended and now it was time for the baby to be born due to hospital policy⁸¹. When passing the due date, it is expressed in several studies how women themselves try to initiate labour by using proactive measures such as sex or homeopathic preparations^{68,71}.

Women whose labour has been induced are generally less satisfied with their childbirth experience than women whose labour started spontaneously⁸²⁻⁸⁴. With an induction in late-term pregnancy, women have described how they perceived being less involved in decision-making, and how organisational factors and routines tended to control the care to a larger extent⁷⁹. Women with induced labour are less likely to move around during labour and are significantly less likely to have normal labour and birth, and more midwives are involved due to increased length of labour⁸². It is more common to use epidural for pain relief, and baths and showers are less used when labour is induced⁸³. In a qualitative study, women were interviewed before and after the induction of labour. There were several factors influencing women's choice to request induction of labour, including safety of the baby, women's trust in their clinician, the relief of discomfort and/or anxiety, diminishing potential of actual risk and seeing induction as an opportunity to improve the childbirth experience. However, women wanted more information prior to induction to enable them to make informed decisions⁸⁵.

In a questionnaire study from the Netherlands⁸⁶, of 604 women, 270 (44.7%) preferred induction of labour in gestational week 41, 254 (42.1%) reported preferring expectant management and 74 (12.2%) women did not have a preference. Women who preferred induction of labour reported lower quality of life and higher levels of anxiety than women who preferred expectant management. The main reason for wanting to await the spontaneous onset of labour was the wish to give birth as naturally as possible. The main reasons for wanting an induction of labour were that it provided a safe feeling, the pregnancy taking too long and knowing what to expect.

Previous studies of women's childbirth experiences of induction of labour have not been randomised control trials^{82,87}, which makes it difficult to compare results.

1.6 SWEPIIS

Two of the included studies in this thesis, Study II and Study III, are sub-studies to the larger Swedish Post-term Induction Study (SWEPIIS)^{88,89}. SWEPIIS was designed and performed due to inconclusive results seen in previous studies regarding maternal and perinatal outcomes and the lack of trials comparing induction of labour at 41 weeks with expectant management until 42 weeks. The aim of SWEPIIS was to evaluate if induction of labour at 41 weeks and 0-1 days compared with expectant management and induction

of labour at 42 weeks and 0-1 days would improve perinatal outcomes in healthy women with a low-risk pregnancy.

SWEPIS was conducted in Sweden on 14 hospitals (five university hospitals and nine county hospitals) between May 2016 and October 2018. Eligible for participating in the study were women pregnant between 40 weeks +6 days and 41 weeks and 0-1 days according to ultrasound-based dating. Study participants needed to be of age 18 or more years, understand oral and written information and have a singleton pregnancy in cephalic presentation. Women with previous caesarean section or other known medical conditions that could affect the outcome of the pregnancy and labour were excluded. Pregnant women received information about the study at around 40 weeks of pregnancy from the antenatal health care midwife, and women interested in participating in the study contacted the research midwife to book an appointment for randomisation. In the Stockholm region, women were enrolled during a voluntary ultrasound scan that is offered in the region to women at 41 weeks of pregnancy. Written informed consent was obtained before randomisation. Women were randomised to either the induction group where labour was induced within 24 hours or to the expectant management group where labour was induced at 42 weeks and 0-1 days if the woman had not given birth by then. SWEPIS was register-based, and most data collection was done using the Swedish Pregnancy Register^{88,89}.

In October 2018, the Data and Safety Monitoring Board strongly recommended stopping the study early, due to a significantly higher perinatal mortality in the expectant management group (n=6) compared to no perinatal deaths in the induction group (n=0, p=0.03); it was not considered ethical to continue the study. In total, 1383 women were randomised to the induction group and 1379 to the expectant management group. There was no significant difference in the primary outcome, which was a composite of perinatal mortality and adverse morbidity, and there were no differences in secondary outcomes like caesarean section, instrumental vaginal birth, postpartum bleeding, or maternal infection between the two randomised groups. Thus, there was a reduction of perinatal death in the induction group without affecting maternal outcomes⁸⁹.

2 RATIONALE

In Sweden, as well as in other high-income countries, medicalisation and interventions such as induction of labour, has increased over time. About 20 percent of all pregnancies in Sweden reach 41 gestational weeks. This means that around 25 000 women each year give birth in late- or post-term pregnancy. National guidelines now recommend induction or extra control in week 41 and for the labour to have started before week 42. This is also the recommendation given by the WHO. Due to the fact that induction of labour is recommended earlier, more women face the decision and experience of induction of labour in late-term pregnancy.

Childbirth experiences influences women's lives both in a short and long-term perspective. To evaluate and/or compare care, there is a need for validated instruments measuring childbirth experiences. No studies were found that could provide an overview of existing instruments. However, there are few studies on women's experiences of induction in late- and post-term pregnancy, and no studies were found about the experience of wanting to await spontaneous onset in week 41. Therefore, this thesis focuses on women's experiences and perspectives of labour and birth and induction in late- and post-term pregnancy, both experiences of wanting and having an induction of labour, as well as the experiences from wanting to await spontaneous onset of labour.

3 AIM

3.1.1 Overall aim

The overall aim for this thesis was to obtain a deeper understanding of women's experiences and perspectives of giving birth in late- and post-term pregnancy.

3.1.2 Specific aims

- Study I* To identify and present validated instruments measuring women's childbirth experiences.
- Study II* To compare childbirth experiences in women randomly assigned to either induction of labour at 41 weeks or to expectant management until 42 weeks, in the Swedish Post-term Induction Study.
- Study III* To gain a deeper understanding of women's lived experiences of induction of labour in late- and post-term pregnancy, in the Swedish Post-term Induction Study.
- Study IV* To explore the experience and perspectives of pregnancy and birth in women who wish to await spontaneous onset of labour in late-term pregnancy.

4 METHODS

In doing research, depending on the aim, different methods can be used to complement each other and gain a deeper understanding of the research phenomenon. This thesis focuses on women's experiences and perspectives of giving birth in late- and post-term pregnancy. The use of different research methods aims to give a broader perspective as well as a deeper understanding of the experiences and perspectives of women's childbirth experiences. What type of research design and method to use, should derive from the research question, and several methodological choices are to be made and considered.

4.1 METHODOLOGICAL ASPECTS

4.1.1 *Measuring experiences*

Individual experiences are subjective. When asking people to fill in a questionnaire of their experiences of a certain event or concept, there are rigorous methodological steps to take to make those subjective experiences quantitative, meaning they become measurable. With those experiences into measurable data, they can be used in research as endpoints in clinical trials and to evaluate different interventions, and in clinical settings, to evaluate care. It is important that subjective indicators are considered as well as medical outcomes in clinical trials. It is also important to identify different aspects of well-being that can be affected by an intervention or therapy⁹⁰.

It requires large and rigorous work to develop an instrument. For it to have good psychometric properties, the questionnaire needs to have been carefully designed and tested in different phases. The initial phases of instrument development are qualitative, when generating items and making sure all concepts in relation to the aim of the instrument are considered. Both the targeted population and health-care specialists within the area should be involved in this process. The accuracy of quantitative testing of results relies on the base of qualitative phases of the instrument development being thorough⁹⁰.

A questionnaire or instrument can be constructed in several different ways. These can range from single global questions to more detailed psychometric methods. Usually, instruments contain multiple questions or items, and combined they produce an overall score. The items can also be grouped together in different dimensions. However, to ensure that the information

generated from the instrument actually measures what it is intended to, the instrument needs to have been properly developed and tested. It needs to be evaluated for reliability and different forms of validity to ensure that has the ability to detect changes⁹⁰.

Measuring women's childbirth experiences enables us to compare how an intervention can affect women on a general level within a clinical trial. It is important that the experiences of the women affected by the intervention are always taken in consideration when evaluating outcomes in clinical trials, and that not only medical outcomes are considered.

4.1.2 Qualitative research methodology

There are numerous epistemological traditions. When doing qualitative research, we relinquish the traditional medical research that has a tendency of focusing on symptoms and instead take on a broader perspective on health. While only focusing on symptoms often refers to more biological functions of the body, a broader perspective on health and well-being with the individual subject as the source of knowledge, can help us to understand individual needs within health care⁹¹.

Phenomenology and thematic analysis are two qualitative research methods used in this thesis.

4.1.3 Phenomenology

Phenomenology is a research method with a strong foundation in philosophy. Husserl (1859-1938) is the founder of phenomenology as we know it today. He described building a foundation by 'going to the things themselves'⁹². His philosophy was further developed by Heidegger (1889-1976) focusing on the fundamental question of being in the world⁹³. Influenced by Husserl and Heidegger, Merleau-Ponty (1908-1961) further developed the lifeworld as 'being to the world' where he presents the lifeworld as our lived body⁹⁴. Gadamer (1900-2002) further elaborated phenomenology and one of the areas was the nature of human understanding⁹⁵.

Within phenomenology, two central concepts are the natural attitude and the lifeworld. With the natural attitude, we don't really think of what we are doing. Everyday life happens without being questioned. In order to understand the happening in the encounter between ourselves and the world, we need to observe and look closer on what we take for granted. Phenomenology and the lifeworld question how we experience the world, with a wish to know the world

in which we live as human beings. It is about gaining a deeper understanding and awareness of individuals' experiences. For example, we do not see joy; we see a smile, which is interpreted as joy. The way we understand things, our horizon of understanding, is constantly changing^{96,97}. This is important, as midwives, obstetricians and other health care personnel need a deep understanding of pregnant and labouring women's experiences in order to meet their individual needs and to enable individual care and promote a positive birth experience.

4.1.4 Thematic analysis

The concept of thematic analysis was initially developed by Holton in 1973⁹⁸ and aimed at identifying patterns of meaning, referred to as *themata* by Holton. Thematic analysis was further discussed by Merton⁹⁹ in 1975, where *themata* was compared with Polanyi's¹⁰⁰ concept of tacit knowledge. Thematic analysis is not bound to a specific epistemological approach. Therefore, due to its theoretical freedom and diversity, it can be seen as a foundational method^{101,102}.

4.2 OVERVIEW OF INCLUDED STUDIES

This thesis builds on four studies. Two of the studies focused on measuring women's childbirth experiences. Using questionnaires to quantify and measure women's childbirth experiences enables us to generalise, evaluate and/or compare care given. The last two studies were qualitative studies where women were interviewed about their experiences to give us a deeper understanding. The study design, data collection, sample/participants, and data analysis for the included studies are summarised in Table 1.

4.3 STUDY DESIGNS

This thesis involves three types of study designs: a systematic review, a randomised controlled trial (RCT) and qualitative studies with phenomenology and thematic analysis methods. These study designs are described in the next section to give a brief overview of the included methods.

| | Study I | Study II | Study III | Study IV |
|-----------------------------|--|---|--|--|
| Study design | Systematic review | Randomised controlled trial | Qualitative | Qualitative |
| Data collection | Literature search | Questionnaires | In-depth interviews | In-depth interviews |
| Sample/ participants | 46 articles presenting 36 instruments | 656 women for primary outcome, 1457 for exploratory outcome | 12 women who had their labours induced within SWEPIS | 7 women wanting to await spontaneous onset in late- term pregnancy |
| Data analysis | Data extraction and quality assessment | Descriptive statistical analysis | Phenomenology | Thematic analysis |

Table 1. Overview of included studies in this thesis

4.3.1 Study I – Systematic review

Study I in this thesis is a systematic review. A systematic review is a rigorous method of research that follows a systematic procedure to merge the findings of a specific subject into one place. In order to obtain a more accessible overview of existing evidence, there is a need to merge already performed research in specific areas¹⁰³. When planning for Study I, we knew there were several existing instruments aiming to capture women's childbirth experiences from different perspectives. We therefore decided to do a systematic review to get an overview of the instruments.

4.3.2 Study II – Randomised controlled trial

RCT is considered a rigorous method for research and aims to minimise unconscious and deliberate influences from researchers, participants and all others involved in the research^{104,105}. Study II was a questionnaire study within a larger RCT. All participating women were included and randomised in SWEPIS. Women included in Study II responded either to a questionnaire

about their childbirth experience (CEQ2) three months after birth or to an overall question on the childbirth experience on a visual analogue scale (VAS 1-10) within three days of birth. This allowed us to compare the childbirth experiences between the two randomised groups to make it possible to identify how the intervention, as well as the routine care given to the expectant management group, were experienced by the participants.

4.3.3 Study III-IV – Qualitative interview studies

Qualitative research has the impact of communicating how an experience can be perceived and the meanings people connect to their experiences. For qualitative methodologies, there is a broad range of different analytic methods. The choice depends on the aim and nature of the study, where one might be most suitable for a specific study. In this thesis, for Study III, phenomenology was used as the analytic method⁹⁶ and, for Study IV, thematic analysis¹⁰⁶.

Reflective lifeworld research

There are different traditions within phenomenology. Reflective lifeworld research is a research design described and developed by Dahlberg et al.⁹⁶. It is developed to explore phenomena within health care and is based on the work of Husserl and Merleau-Ponty. The foundation for reflective lifeworld research builds on philosophy of phenomenology. The overall aim of reflective lifeworld research is to describe and clarify the lived experience to increase our understanding of the phenomena⁹⁶.

Reflexive thematic analysis

Thematic analysis is a foundational and flexible method within qualitative analysis. There are different approaches. In reflexive thematic analysis, themes are identified, coded, and analysed in relation to the research question. It is the researcher who identifies and determines the themes. Done with an inductive approach, there is a search across the data set to find repeated patterns of meaning^{101,106}.

4.4 DATA COLLECTION

This thesis consists of four studies from four data collections.

4.4.1 Study I

An instrument is a developed questionnaire that has been tested for validity and reliability. For inclusion in the systematic review, the papers were to

describe the development or test psychometric properties of instruments assessing different dimensions related to women's childbirth experiences.

For the search strategy, we chose to have a broad definition and use related terms and concepts to ensure that no relevant papers were missed in the search (included search blocks presented in Table 2). The search strategy was developed with the help of a librarian at the Biomedical Library at Gothenburg University Library. The final search took place in January 2016 in the databases PubMed, CINAHL, Scopus, Cochrane Library and PsycINFO.

Table 2. Search blocks used in Study I

| | | | |
|---------------|-----------|--------------------|--------------|
| Instrument | Valid | Childbirth | Experience |
| Questionnaire | Developed | Birth | Satisfaction |
| Scale | Reliable | Parturition | Fear |
| Tool | | Labour/Labor | Perception |
| Index | | Obstetric delivery | |

4.4.2 Study II

Women's childbirth experiences between the two randomised groups in SWEPIIS were compared using the Childbirth Experience Questionnaire version 2 (CEQ2). As an exploratory outcome, overall childbirth experience was measured using VAS (1-10) for the participants in SWEPIIS that did not respond to CEQ2.

Childbirth Experience questionnaire version 2

CEQ2 is a revised version of the original Childbirth Experience Questionnaire, CEQ¹⁰⁷, which that is a well-developed and validated instrument¹⁰⁸. Both the original CEQ and the revised version, CEQ2, have been translated and culturally adapted to several languages and are used both in Sweden and abroad¹⁰⁹⁻¹¹⁸.

CEQ2 consist of 22 items in four domains. The first domain, *Own capacity*, contains eight items related to how strong, capable, happy, and tired participants felt as well as regarding pain, control, and if the birth went as they had expected. The second domain, *Perceived safety*, contains six items related to positive/negative memories and feeling scared or secure during childbirth. The third dimension, *Professional support*, contains five items related to encouragement, inner strength, atmosphere of calm, being treated with respect, and the presence of the midwife. The final domain, *Participation*, contains

three items related to information, decisions, and being listened to during labour and birth¹¹⁹ (see Appendix).

Participants respond to 19 items on a 4-point Likert scale ranging from totally agree to totally disagree. Three of the items are responded to on a VAS (1-100). The VAS are transformed to categorical values 1-4. There are eight items reversed in scoring. When computing the scores of the domains, all the items of the domain are summed and divided by the number of items. The scores for each domain and for the total CEQ2 would then range from 1 to 4. Higher ratings reflect a more positive experience and lower ratings a more negative experience¹¹⁹.

Overall childbirth experience measured with VAS

As part of the clinical routine, either before discharge from the maternity ward or on a follow-up appointment after a few days, women are asked to rate their overall childbirth experience on a scale from 1 to 10. A low rating represents a more negative experience. A rating of 8-10 is considered a very positive experience¹²⁰. The data on women's ratings of the overall childbirth experience on VAS 1-10 were retrieved from The Swedish Pregnancy Register¹²¹.

4.4.3 Study III

Data gathering for a qualitative study aims at seeking descriptions, characterisations, variations and other possible expressions of the studied phenomenon⁹⁶. The data set should respond to the research question. To gain a deeper understanding of women's experiences, we chose to do in-depth interviews using a reflective lifeworld approach. An open interview is focused on the phenomenon of interest and offers the possibility for new insights and new ways of seeing the phenomenon of interest. Ideally, the interviewer can get the interviewee to reflect on the phenomenon. The person interviewing is to support the person being interviewed and enable them to reflect on and deepen their stories. The phenomenon is to be assessed as deeply and thoroughly as possible during the interview. It is up to the researcher to ask questions and give comments that enable this⁹⁶. The interviews started with an open question: 'Can you tell me about your experience of having your labour induced?' To gain a deeper understanding of the woman's experiences, follow-up questions were asked, such as 'Can you tell me more about...?' and 'How do you mean?'

4.4.4 *Study IV*

For reflexive thematic analysis, a wide range of methods to collect data can be used^{101,102}. To gain a deeper understanding of women's experiences and perspectives, we chose to do in-depth interviews for Study IV. The interviews started with an open question: 'Can you tell me how you thought about your pregnancy and the upcoming labour and birth when you were in week 41?' Follow-up questions were, for example, 'Can you tell me more?' and 'How did you react and feel in this situation?'

4.5 SAMPLE/PARTICIPANTS

4.5.1 *Study I*

In total, 8074 citations were identified in the literature search (PubMed $n=2785$, CHINAL $n=1140$, PsycINFO $n=558$, Scopus $n=3426$ and Cochrane Library $n=165$). The search result was imported into a software management system, EndNote. After removing all duplicates, 5106 titles were screened by title where clearly not relevant papers were excluded, for example papers assessing contraceptives, childhood development or conditions not associated with childbirth. After this first step, the remaining 809 papers were screened by abstract in two steps: first removing all papers not related to childbirth and, in the next step, a more thorough assessment of the abstract, which resulted in 69 papers to review in full text. Of these, 43 papers met the inclusion criteria. After screening the reference lists of the included papers, an additional 14 papers were screened in full text. This resulted in an additional three papers included in the review. The names of the instruments were searched in PubMed and CINAHL, but no further papers were identified. In total, 46 papers met the eligibility criteria and were included in the analysis.

4.5.2 *Study II-III*

Study II and III are sub-studies in SWEPIs⁸⁹. All the women participating in these two studies were included and randomised in SWEPIs. Inclusion of participants for SWEPIs was made at 14 centres in Sweden (Sahlgrenska University Hospital, Örebro University Hospital, Falun Hospital, Uppsala University Hospital, Södra Älvsborg Hospital, Region Stockholm with 5 hospitals participating, Varberg Hospital, Halmstad Hospital, Visby Hospital and Norra Älvsborg County Hospital). Eligible for participating in the study were women pregnant between 40 weeks +6 days and 41 weeks 0-1 days according to ultrasound-based dating. They needed to be of aged 18 years or

over, understand oral and written information and have a singleton pregnancy in cephalic presentation. Women with previous caesarean section or other known medical conditions that could affect the outcome of the pregnancy and labour were excluded.

Pregnant women received information about the study at around 40 weeks of pregnancy through the antenatal midwifery, and women interested in participating in SWEPIIS contacted the research midwife to book an appointment for randomisation. In the Stockholm region women, were enrolled during a voluntary ultrasound scan that is offered in the region to women at 41 weeks of pregnancy. Written informed consent was obtained before randomisation. Women were randomised to either the induction group, where labour was induced within 24 hours, or to the expectant management group, where labour was induced at 42 gestational weeks and 0-1 days, if they had not given birth by then.

All participants included in SWEPIIS had received written and oral information about the study. They were informed that they were free to withdraw from participation at any time without having to provide any reasons for withdrawal. Women who did not want induction of labour were recommended not to participate. At randomisation, the participants were allocated a code that later was used in data processing so that when analysing data, no individual could be identified.

Study II

In Study II, as a primary outcome, women included at Sahlgrenska University Hospital, Örebro University Hospital and Falun Hospital were asked to complete CEQ2 3 months after randomisation. CEQ2 was sent as a link through e-mail. In total, two reminders were sent. The three included hospitals were chosen to get a geographical spread as well as different sized birth clinics.

CEQ2

Inclusion started at Sahlgrenska University Hospital in May 2016, Örebro University Hospital in January 2017, and Falun Hospital in September 2017. Both Örebro and Falun hospitals started inclusion at a later time and are smaller birth clinics compared to Sahlgrenska University Hospital. Therefore, fewer women were randomised at these clinics, and fewer responded to CEQ2.

In total, 960 women were randomised in these three centres (Sahlgrenska University Hospital $n=776$, Falun Hospital $n=119$ and Örebro University Hospital $n=65$). Of these, 911 women were asked to fill in the questionnaire, which was available in Swedish and English. Of the 49 women that were

excluded (25 in the induction group and 24 in the expectant management group), one withdrew consent, 22 were not fluent in Swedish or English and 26 exclusions were due to practical and technical issues with the e-mail link.

In the induction group, 354 women (78%) responded to CEQ2, and in the expectant management group, 302 women (66%) responded to the questionnaire (see Figure 1). The distribution between the centres among those responding to CEQ was Sahlgrenska University Hospital $n=548$, Falun Hospital $n=65$ and Örebro University Hospital $n=43$.

VAS

As an exploratory outcome, a comparison of the responses on overall childbirth experiences answered on VAS 1-10 was made on the remaining 11 centres participating in SWEPIS (Uppsala University Hospital, Södra Älvsborg Hospital, Region Stockholm with 5 hospitals participating, Varberg Hospital, Halmstad Hospital, Visby Hospital and Norra Älvsborg County Hospital).

In total, 1802 women was randomised at these remaining centres. Of the 903 women randomised to the induction group, 722 (80%) responded to the overall childbirth experience measured with VAS 1-10. In the expectant management group, 735 of 899 (83%) responded to the VAS (see Figure 1).

Characteristics

The larger differences between the two randomised groups in SWEPIS were that more women had their labour induced in the induction group (85.5%) compared to those in the expectant management group (33.1%). Likewise, more women had spontaneous onset in the expectant management group (66.7%) compared to the induction group (14.1%). Women in the expectant management group gave birth, on average, 2.9 days later than the induction group. Women in induction group spent 6.5 hours longer from admittance to the labour ward until the birth of their baby. Babies born to women in the expectant management group had, on average, 60 g higher birth weight, and more babies in the expectant management group had macrosomia (birthweight ≥ 4500 g) (8.3%) compared to the induction group (4.9%)⁸⁹.

Study III

For this interview study, women that participated in SWEPIS and had their labours induced were eligible for inclusion. Women were sent an e-mail with information about the study. If they would consider being interviewed, they were asked to respond to the e-mail and to be contacted over the phone for further information and to make an appointment for the interview. The women chose the location and time at their convenience.

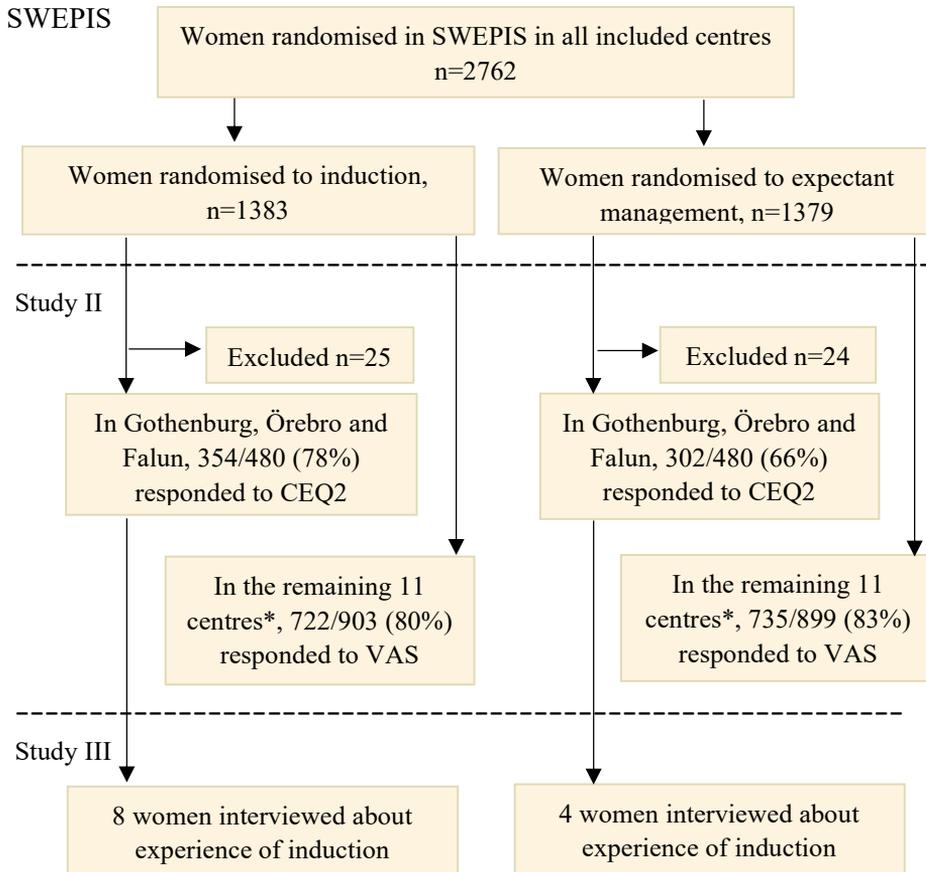


Figure 1. Flowchart illustrating the inclusion of the study populations in Study II and Study III.

* Uppsala University Hospital, Södra Älvsborg Hospital, Region Stockholm with five hospitals participating, Varberg Hospital, Halmstad Hospital, Visby Hospital and Norra Älvsborg County Hospital

To obtain a rich variation in the data, women from both randomised groups, with experiences of induction of labour in gestational weeks 41 and 42 were included. Women with different outcomes of labour were included, both women experiencing shorter inductions and uncomplicated births as well as those having long inductions spanning over several days and more complications at labour and birth, such as assisted vaginal birth or caesarean section. Both women experiencing their first childbirth as well as those with previous birth experiences were included in the study. The geographical area

the women lived in was considered in order to get a broad variation of cultural backgrounds.

Twelve women were interviewed between January and December 2018 about their experiences of induction of labour. They were 29 to 42 years old; eleven were born in Sweden and one outside of Europe. Nine of the women had completed University education and three high school. All interviews were conducted in Swedish. It was the first labour and birth for seven of these women, second for four of them and for one woman it was the third birth. Eight of the women had induction of labour in gestational week 41 and four in gestational week 42. The time for induction and labour varied from a few hours to several days, including several different inductions methods such as cervical ripening with prostaglandins and/or Foley catheter, amniotomy and intravenous infusion with synthetic oxytocin. Nine of the women had spontaneous vaginal births, one had an instrumental vaginal birth, and two had an emergency caesarean section.

Eight of the women were interviewed in their homes, and four at Sahlgrenska Hospital where they had been randomised for inclusion in SWEPIIS. The interviews were recorded on a portable audio recorder and lasted between 26 and 110 minutes. The interviews were transcribed verbatim. All the participants gave their written consent before the interviews began. The women's names are replaced by pseudonyms chosen by themselves.

4.5.3 Study IV

Routines for the induction of labour changed in several regions in Sweden after the SWEPIIS results were published in November 2019. At the university Hospital where women were recruited for this study, they are offered an appointment with a midwife or obstetrician at gestational week 41+0 for assessment and planning for induction of labour, offering induction before gestational week 41+3. During the visit, a vaginal examination to assess the maturity of the cervix and cardiotocography monitoring to assess foetal well-being are done. Women who wish to have an induction of labour at this visit are booked for an induction before gestational week 41+3 days. Women who wish to further await spontaneous onset of labour are offered an ultrasound scan to ascertain normal amount of amniotic fluid and rule out that the baby is small for gestational age. This confirms normal pregnancy. For Study IV, women were eligible for inclusion if they expressed that they wanted to await spontaneous onset of labour further than week 41+3 at this visit.

At the appointment in week 41, the midwife or obstetrician gave written information about the study and asked for consent to be contacted by the study coordinator for inclusion 1 month after birth. If the women consented, they were contacted by e-mail and/or phone 4-6 weeks after birth and asked if they would consent to participate. If they consented to participate, a day and time for an interview over Zoom was scheduled. The participants were sent a consent form by post that they signed and returned to the interviewer.

Ten women were interviewed between November and December 2021 about their experiences and perspectives of pregnancy and childbirth. They were between 28 and 37 years old. Five of the women were born in Sweden, one in another country in Europe and four outside of Europe. Six of the women had a university education, three had a high school and one a primary education. Eight of the interviews were conducted in Swedish, of which two of the women had a more basic knowledge of Swedish were not able to use a more nuanced language; however, they were still understandable. Two of the interviews were conducted in English. For four of the women, this was their first birth. The remaining six women had two to six births. Three of the women had experience of induction in previous pregnancies, all due to late- or post-term pregnancy. One of the women had a previous caesarean section, and one had previous uterus surgery. Seven of the women had a spontaneous onset of birth. Three of the women had induction of labour, two of them after reaching week 41+5, as they by then felt that they did not want to await spontaneous onset further. One woman had induction of labour in week 41+1 after consultation with a doctor. Everything looked normal with the pregnancy, but the woman perceived the information she received as the baby could die at any time if she did not have the induction and therefore changed her mind and signed up for induction of labour. Nine of the women had spontaneous vaginal births, and one had an emergency caesarean section after a failed induction.

All the women were interviewed over Zoom due to the Covid-19 pandemic. Before the interview began, the participant signed a written consent, which was posted to the interviewer. The interviews were recorded, lasted 26 to 69 minutes (median 37 minutes), and were transcribed verbatim. The women's names were replaced by pseudonyms in the result, chosen by themselves.

4.6 DATA ANALYSIS

4.6.1 Study I

For quality assessment of the included studies in the systematic review, we used the quality criteria for measurement properties of health status questionnaires by Terwee et al.¹²². The criteria were developed to assess the quality of the design, methods, and outcomes of health status questionnaires. The quality criteria assess the following measurement properties: content validity, internal consistency, criterion validity, construct validity, reproducibility, responsiveness, floor and ceiling effects, and interpretability. For each measurement property, they give clear instructions for how to mark the quality criteria that should be included for the questionnaire to receive a positive rating, a question mark, a minus or a zero.

In addition to the measurement properties addressed by Terwee et al., we added two more properties. The first one, called *the need for the instrument*, was related to the background work of the construction of the instrument and whether the authors had demonstrated the need to develop and test a new instrument. The second property measurement we added was *face validity*. In the quality criteria by Terwee et al.,¹²², face validity is part of content validity. However, lifting face validity separately added one more score to the important measurement property content validity. As these instruments focused on women's childbirth experiences, we found it especially important that childbearing women were included in the development of the questionnaire.

To enable a comparison between the questionnaires, we added a marking score related to the quality criteria, this to make it easier to get an overview of the quality of the included questionnaires. A problem with adding this score, which is also lifted by Terwee et al.¹²², is that this overall score assumes all measurement properties to be equally important. However, this is not the case. For example, if the content validity is not satisfactory, it would not be advised to use the questionnaire at all. However, the overall marking score for the questionnaires aid in giving a rough overall guide of the included instruments. Nonetheless, the total score needs to be interpreted with caution, as two questionnaires receiving the same total score can still have very different quality, depending on the quality criteria used for the points.

4.6.2 Study II

In study II, there were two outcomes, a primary and an exploratory. The primary outcome was women's childbirth experiences between the two

randomised groups in SWEPIIS measured with CEQ2 in three of the participating centres. As an exploratory outcome, women's childbirth experiences in SWEPIIS were compared using an overall VAS score contained from the Swedish Pregnancy Register.

There were no incomplete questionnaires. All the questionnaire data as well as complementary information collected through the online randomisation module set up by the Swedish Pregnancy Register¹²¹ was downloaded to SPSS V.25.0 for data analysis whilst data related to VAS was analysed using SAS V.9.

CEQ2 and VAS scores

Mean, standard deviation (SD), median, 25-75 quartiles and 95% confidential intervals were calculated for the four domains, the total SEQ2 score and VAS on overall childbirth experience. The Mann-Whitney U test was used to calculate p-values. To estimate clinical differences between the groups, Cohen's effect size¹²³ was used. All data and analyses related to the population responding to CEQ, in consultation with supervisors and co-authors, were handled and calculated by me, while the data related to VAS were handled and calculated by a statistician.

4.6.3 Study III

In Study III, we used reflective lifeworld research for the analysis as described by Dahlberg et al.⁹⁶. The analysis is described as a movement between the whole – the parts – the whole. This means that the parts are to be understood in terms of the whole as well as the whole to be understood in terms of its parts at all times, with an openness towards the data and following their movements.

The first phase in the analysis was to familiarize with the data by reading it and getting a sense of the initial whole. As one becomes more familiar with the data, the complexity and diversity unfolds. In the next phase of the analysis, the data were put into 'meaning units' and the work of understanding the meaning started. To gain a deeper understanding of the phenomenon, there is a need to divide the text into smaller parts, called 'meaning units'. Knowing the whole of the data, now starting to find the structure of meaning, the next phase has begun. Clusters of meaning are temporary patterns, which aid the researcher in seeing structures describing the phenomenon. It all comes together as a new whole, being more than the sum of its parts. The next step, when the data have come together as a new whole forming a pattern describing the phenomenon, is to describe the essence of the phenomenon. The essence describes the phenomenon on a more abstract level. The essence is further

described by its constituents. The constituents present possible nuances in the data⁹⁶.

4.6.4 Study IV

In Study IV, we used reflexive thematic analysis^{101,106}, which is a method used to analyse data. Braun and Clarke¹⁰⁶ presented six phases in their guide to thematic analysis. However, the analysis is to be considered a recursive process with movements back and forth as needed and are not to be rushed. The *first phase* was to familiarize with the depth and breadth of the data. This thorough reading will generate ideas about what is of interest in the data. In the *second phase*, the data are coded. These initial codes refer to basic segments in the data and help organise the data. In the *third phase*, the codes are sorted into potential themes and a thematic map is organised with themes and subthemes. In the *fourth phase*, the themes are reviewed and refined. Another read-through of the data set was made as well to make sure the themes work in relation to the data and that no themes have been missed when coding. The *fifth phase* is about further refining the themes, defining and naming them. At the end of this phase, it should be possible to describe the content of the themes with a couple of sentences. The last and *final phase* involves writing the report and telling the story of the data in a concise, logical and non-repetitive way.

4.7 ETHICAL CONSIDERATIONS

The studies included in this thesis were designed and conducted in line with the Declaration of Helsinki Ethical Principles for research. Research should always be done in the best interest of the patient and to generate new knowledge. All risks involved with participating in the study should be considered¹²⁴.

Study II is a sub study to the main SWEPI^{88,89} using questionnaire data collected 3 months after randomisation and data from the Swedish Pregnancy Register. Written information about the study was given by the antenatal midwife and those women interested in participating contacted the study coordinator. All participants were informed that they could end their participation at any time without any reprisal. Also, all participants signed a consent form before randomisation.

Both Study III and Study IV are interview studies and with similar ethical premises. In Study III, women participating in SWEPI were interviewed about their experiences of being induced in a late- or post-term pregnancy. In

Study IV, women that expressed a wish to await spontaneous onset were interviewed about their experience and perspective. All participants received written and oral information about the studies and were given the possibility to ask questions before deciding to participate. All participants signed a consent form before being interviewed and were informed they could interrupt their participation at any point without reason. To ensure anonymity, participants chose a pseudonym that was used during the analysis and used for quotations in the final text.

In the interview situations, there was a risk of awakening traumatic memories if the childbirth was perceived as traumatic. On the other hand, it can be perceived as relief and a benefit to talk about the experience. The interviews were done by me, a midwife with experience in meeting women in labour and birth as well as postpartum. During the interviews, this enabled me to be attentive to the needs of the women. If they wanted further help in processing their experiences, we could offer aid by referring them to appropriate care.

4.8 ETHICAL APPROVAL

Study I

This study is a systematic review and builds on already published studies. Therefore, there were no need to apply for ethical approval.

Study II

Ethical approval was provided by the Regional Ethics Board in Gothenburg, Sweden, in May 2014 (Dnr: 285–14).

Study III

For ethical approval, a complementary application to the ethical approval for the main SWEPIS (see Study II) was made and approved in December 2017 (Dnr: T1066-17).

Study IV

Ethical approval was obtained from the Swedish Ethical Review Authority, Sweden, in June 2021 (Dnr: 2021-02478).

5 RESULTS

A small summary of the results for the individual studies I-IV is presented in this section.

5.1 STUDY I

In Study I, a systematic review aiming to identify instruments measuring women's childbirth experiences was performed. The systematic literature search resulted in 46 papers presenting 37 instruments. These were assessed for quality ratings of psychometric properties. In addition, the descriptive characteristics of the included instruments were presented in the results to enable a first screening to identify instruments of interest for readers. For instruments assigned a low-quality rating, we recommended using them only if further testing was performed and no other suitable instrument within the same area would serve the same purpose. For the instruments that gained a medium rating, we concluded they were likely suitable instruments to use, unless a similar instrument with a higher rating within the same area was available. For the instruments gaining higher ratings, we proposed them to be of high quality with good psychometric properties. One of the questionnaires with a high score, CEQ, was used in a revised version, CEQ2, in Study II.

5.2 STUDY II

In Study II, women's childbirth experiences were compared between the two randomised groups in SWEPIIS. The primary outcome, childbirth experience measured with CEQ2 between the two randomised groups participating at Sahlgrenska Hospital, Örebro University Hospital and Falun Hospital, showed no significant difference between the induction and expectant management groups in three of the domains, namely *Own capacity*, *Perceived safety* and *Professional support*, or in the total overall CEQ2 score. In the domain *Participation*, the women in the induction group scored slightly higher than those in the expectant management group ($p=0.02$), but with a small effect size (0.19).

In the exploratory outcome, childbirth experience between the two randomised groups at the remaining centres participating in SWEPIIS was compared using an overall rating of childbirth experience with a VAS 1-10. There were no differences between the two groups, either in the overall childbirth experience

measured with VAS or when comparing the number of women rating their experience 8-10, considered a very good childbirth experience.

5.3 STUDY III

In Study III, the essence of women's experiences of induction in late- and post-term pregnancy was described as *labour becomes another journey*. The essence is further described by its four constituents: *planning the unplannable*, *being a guest at the labour ward*, *someone else controlling the labour*, and *overshadowed by how it turned out* (see Figure 2).

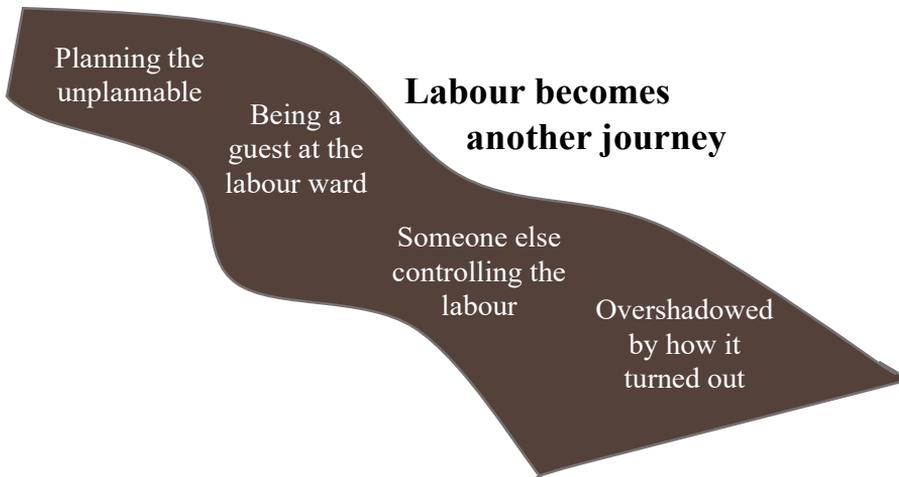


Figure 2. Visualisation of the essence, *Labour becomes another journey*, and its constituents in Study III

The essence, *labour becomes another journey*, describes how women adjust and adapt to the new conditions of their labour. Instead of the body initiating the labour, it is now initiated and managed at the hospital by maternity personnel. They find the positive aspects of induction making *another journey* valuable. However, something lingers in the back of their mind – that something might be lost, the loss of a natural birth.

As a summary, the constituents are further explained. The onset of labour, which the women before did not know when, where or how would start, has now become a planned appointment at the hospital. They are at the hospital, but without having contractions that enable them to experience the labour ward from a different view. They have a large trust in the health care personnel and hand themselves over to their care, as they are perceived to know best. A

medicalised view of labour and birth is expressed. The women trust the personnel to control the labour. Further, they reflect over whether the body and the baby are ready for labour and birth, if it was right to force it into labour. In the end, however, induction is not the most important factor for their childbirth experience. Instead, the experience is overshadowed by how the labour and birth turned out, the encounter with the maternity personnel and a curiosity regarding how the body responded to the induction.

5.4 STUDY IV

In Study IV, the analysis identified three main themes: *well-being and trust in the own body's process, not for me right now – if everything is good*, and *the embodied experience of giving birth*. Each main theme has two to three subthemes. The themes and subthemes are visualised in Figure 3.

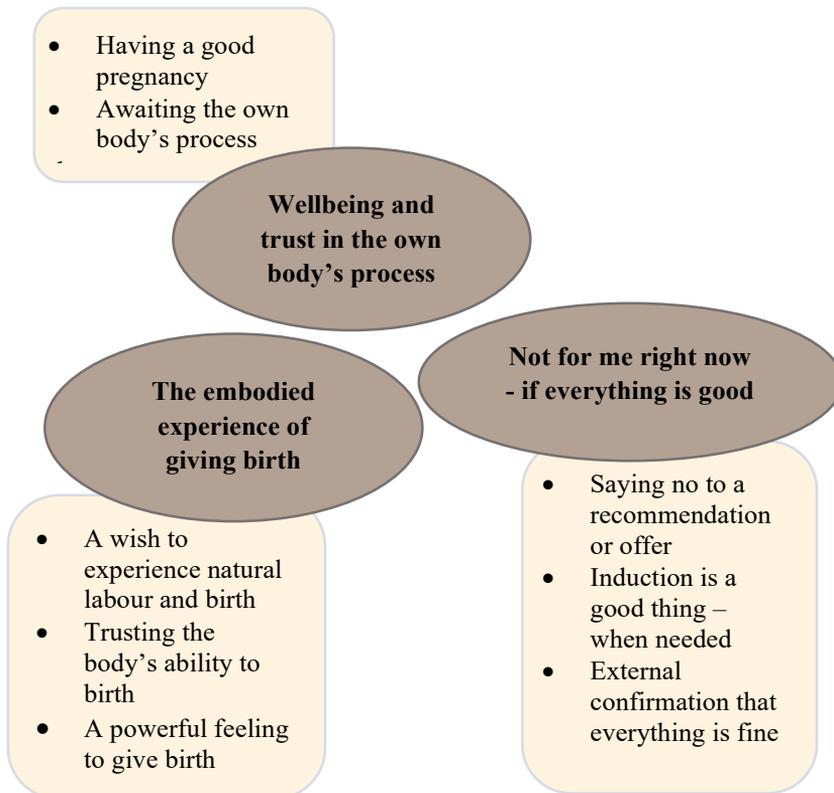


Figure 3. Visualisation of the themes and subthemes in Study IV

In the first theme, *well-being and trust in the own body's process*, the women described feelings of well-being and having good pregnancies. They were attentive to their body's signals and adjusted to physical changes of pregnancy. Their intuition was that everything was normal and that the baby was healthy. They wanted to await labour and birth until the body and baby were ready, awaiting their own body's process and disturbing that process as little as possible.

In the second theme, *not for me right now – if everything is good*, the women describe how a longer pregnancy, i.e. late-term pregnancy, was seen as a variation of a normal pregnancy and not a big thing. They were also aware of complications that could come with longer pregnancies. They had an awareness that most women choose to have an induction in their situation, and some of the women experienced being questioned by both maternity care as well as society. They valued information and support attuned to their individual needs helping them decide what was best for them and being part of decision-making. Induction was something that would intervene with the physiology and own body's process, and that could lead to complications. The appointment in week 41+0 gave them additional information about the baby's health. Although they were not worried about the baby, the check-up was an external confirmation that everything was okay.

The third theme, *the embodied experience of giving birth*, describes the wish for natural labour and birth. The women described being confident in their body's ability to birth and feeling awesome giving birth.

6 DISCUSSION

This thesis aimed to deepen our knowledge about women's experiences and perspectives of giving birth in late- and post-term pregnancy. Study I identified 37 different instruments measuring various aspects of women's childbirth experiences. Several of these instruments were considered to have good validity and reliability both to be used in research and to evaluate care. In Study II, we compared childbirth experiences in late- and post-term pregnancy between two randomised groups where one of the groups had been randomised to induction of labour. The results showed that for women participating in SWEPIIS, there were no differences in childbirth experiences between the two groups. In Study III, we looked deeper into the experience of induction in late- and post-term pregnancy. The essence of the results indicated that the induction of labour became another journey, an experience of labour and birth differing from the spontaneous onset that they had hoped and planned for. The women adjusted and adapted to the new journey. In the last study, Study IV, women with a wish for spontaneous onset of labour in late-term pregnancy were interviewed. The analysis resulted in three main themes. The first reported on well-being and trust in the own body's process. The second theme showed that induction of labour was considered a good thing but was just not for them at this moment if everything was good with the pregnancy. The third theme reported on the embodied experience of giving birth.

The discussion section is divided into two sections. In the first, the methodological considerations of the included studies are discussed. In the second section, the general findings of the included studies are discussed.

6.1 METHODOLOGICAL CONSIDERATIONS

Measuring women's childbirth experiences

The search strategy developed for the literature search in Study I included several words to represent childbirth experiences, e.g. "experience", "satisfaction", "fear", and "perception", after the performance of test searches where these concepts were used when developing instruments evaluating women's experiences of care. Fear of childbirth is a known outcome of a negative childbirth experience¹⁷ and therefore is a related concept for measuring childbirth experience. Hence, fear was used in the search, as it complied with the inclusion criteria.

The search string was developed to not be overly specific, and it generated a large number of citations¹²⁵. For example, ‘labour’ is a difficult word to exclude, but it has also generated many non-relevant studies related to other types of labour. Another search term that generated numerous hits was ‘birth’, but in relation to childhood, e.g. ‘from birth to adolescence’. For one of the databases, PsycINFO, we adjusted the search string, as it alone generated 20 000 hits, which we did not consider manageable. Thus, we might have missed relevant hits in this database.

It is important to use instruments that have been tested in the specific context⁹⁰. There are different birth cultures, and what women expect and find important for their experience may differ depending on the birth culture. Using instruments validated in several cultures enables comparisons between countries as well as international collaborations. For Study II, we used CEQ2¹¹⁹, which is a revised version of CEQ¹⁰⁷. CEQ2 is available in English¹¹⁸ and received high scores in the systematic review (Study I). The Wijma Delivery Experience Questionnaire (W-DEQ)¹²⁶ received the highest score, but it focuses on aspects of the childbirth experience related to fear of childbirth; therefore, CEQ2 was considered the most relevant measurement for Study II.

In Study II, as a secondary outcome, a VAS measurement of the overall childbirth experience was available via the Swedish Pregnancy Register. The advantage with this VAS question is that it is asked as part of clinical routine, and the response rate for the VAS did not differ between the randomised groups. When responding to questionnaires, it is more common for those with very positive or negative experiences to respond⁹⁰. However, the VAS does not assess the same multidimensional aspects of childbirth experiences as CEQ2¹²⁷. Also, the VAS is used within 3 days after birth, which can affect the responses, as women tend to rate their experiences higher directly after birth due to hormones and relief of the baby being born⁸. As a cut-off point for the VAS in Study II, we used the same one as in the Swedish Pregnancy Register, where 8-10 is considered a very good childbirth experience⁵⁵. The VAS is a single-item scale, and CEQ is a multi-item scale. Overall childbirth experience measured with the VAS has been shown to discriminate known groups and between several factors known to affect the childbirth experience, such as EDA, primiparity/multiparity and caesarean section^{84,127,128}. In addition, Turkman et al.¹²⁷ showed that measurement of the overall childbirth experience with the VAS could predict overall CEQ scores. In conclusion, the VAS is a simple and unspecified measurement, but it adds to the comparison in Study II, confirming the result from CEQ2.

The women participating in SWEPIIS

For Study II, three centres in different regions in Sweden were chosen to give diversity to the population¹²⁹: a large university hospital in one of the larger cities in Sweden, a university hospital in a middle-sized town, and a hospital in a more rural region. SWEPIIS was stopped in advance and, therefore, the planned sample size of women responding to CEQ2 was not achieved. However, in total, 656 women responded, which was a sufficient amount for the analysis. Of the 656 women that responded to the questionnaire, 546 (83%) were from the largest hospital. This was because more randomisations were made there, and the study started earlier at this hospital. The response rates, 78% in the induction group and 66% in the expectant management group, were good.

For participation in Study II, women received information from their antenatal care midwife and, if they were interested in participating, they contacted the study coordinator and received more information, and an appointment at the maternity clinic was made for randomisation. This required the women who wanted to participate to make quite an effort, and this might have limited some who wanted to participate. However, it also gave the women time to really consider if they wanted to participate. Earlier studies have reported on the reasons for pregnant women participating in randomised trials. If the intervention is considered favourable and not available outside the trial, this can be a reason to participate in a study^{130,131,132}, and this was applicable for SWEPIIS. The reason can also be a wish to contribute to science and to help others. On the contrary, if a specific intervention has a more negative association, this can be a reason not to participate in a randomised trial¹³⁰. Around 22 percent of all eligible women participated in SWEPIIS⁸⁹, and it can be assumed that those enrolled in SWEPIIS were, to a greater extent, motivated to have an induction of labour and may have been more anxious about continuing pregnancy. On the contrary, women not participating in SWEPIIS might have been more neutral or negative in their attitudes towards induction of labour and been less worried. In a study from the Netherlands⁸⁶, women who opted for induction in late-term pregnancy reported lower quality of life than women who wanted to await spontaneous onset of labour. The women that chose not to participate stated that they wanted a natural birth, while those who wanted induction felt that it provided a safer feeling, the pregnancy was taking too long, and they would know what to expect⁸⁶. Also, the women who participated in SWEPIIS got an extra visit to the midwife for inclusion and randomisation where they received extra information about induction of labour and got time to ask questions. Extra visits and care have been shown to be a positive aspect on outcomes¹³³. These aspects are to be considered, as the

results might not be generalised to all women giving birth in week 41, but they may be foremost for those in favour of induction.

CEQ2 in Study II was sent out 3 months after birth, and the interviews in Study III were conducted 1 to 3 months after birth. Letting some time pass after the birth enables the new family to settle a bit and the woman to process the experience of birth before answering a questionnaire or participating in an interview. Therefore, a reasonably long follow-up time may be of great value, as the childbirth experience changes over time^{3,7}.

The qualitative studies

Objectivity and validity within phenomenology are rooted in the philosophy of going to the things themselves. This means to be open and sensitive to the phenomenon in focus. There is a need for research findings to be generalisable to people beyond those involved in the actual study. The results of a research study must always be considered in relation to the context, i.e. the history, time and circumstances when it was performed⁹⁶. Thus, the experience of induction in Study III may be valid in more contexts than those of the research study. For example, the essence, how induction of labour became another journey, is likely to be valid also for those not in late- or post-term pregnancy, but it must then be interpreted related to the new context. Women need to adapt and adjust to new conditions for their labour, even in other circumstances. For example, if there is a need for induction due to complications to mother or child before late-term pregnancy, the findings of ‘planning the unplannable’ might not be relevant, as the focus might be on other aspects. However, the findings of ‘someone else controlling labour’ might still be relevant in this new context.

To ensure quality and rigour in reflexive qualitative analysis, Braun and Clarke¹⁰¹ highlight the importance of the reflectivity of the researcher to enable a deep and critically open research process. Qualitative research offers insights into the experiences and perspectives of other people¹⁰¹, and Study IV gives us the experiences and perspectives of women who wish to await spontaneous onset of labour in late-term pregnancy. Their experiences and perspectives showed how well-being and trust in their own body’s process enabled them to say no to induction of labour as it was not for them at that point, and contributed to an embodied experience of giving birth.

There is always some pre-understanding of the area of research and the phenomenon of interest. Own experiences, education and research done in the past might influence the methodological choices we make. There is a need to be conscious of this and make sure that it is not a personal pre-understanding of the researcher that comes forward in the analysis but rather the experiences

of the informants¹³⁴. Within qualitative research, the researcher is part of the analysis process in a different way than in quantitative research. This leads to the need to reflect on any pre-understanding and the need to be sufficiently aware so that the analysis does not reflect your own perceptions but that of the respondents. This is referred to as 'bridling' by Dahlberg⁹⁶. Being a midwife and researcher with an interest in women's childbirth experiences, there was a risk during the interviews and analysis process of being quick to draw conclusions. Bridling pre-understanding means to recognise when this happens and refocus on the phenomenon and the interview or analysis process. Throughout the analysis process of Study III, we reflected on our own opinions, experiences and perspectives.

Within reflexive thematic analysis, subjectivity is referred to, rather than pre-understanding. Subjectivity is the feelings, opinions and preferences of the individual researcher. Subjectivity is an active role of the researcher and part of the analysis, enabling the interpretation and analysis to be more insightful, rich and nuanced¹⁰¹. We discussed our subjectivity regarding how we interpreted the data, the thoughts and insights that it gave, and we engaged in active reflection on meaning when conceptualising themes.

Phenomenology is grounded in the ontological and epistemological idea of meanings (as infinitives) and continues to expand. Therefore, there cannot be a saturation. Not until the analysis starts is it possible to fully see the value of the data and if there is a need for more⁹⁶. In Study III, we performed purposive sampling⁹⁶, searching for variation of lived experiences among the women interviewed. Women with different experiences from labour and birth were chosen, and primiparity and multiparity were considered. In total, 12 women were interviewed, giving us rich and diverse data.

Data saturation is not philosophically or methodologically consistent with reflexive thematic analysis. As data can always be looked at from a different perspective, there is always the possibility of new understandings through a reflective process^{101,135}. Instead, Braun and Clarke recommend that researchers reflect over the 'information richness' of the data set, referring to Malterud's¹³⁶ concept of 'information power'. In Study IV, as we were not involved in the process but just handed names, often referred to as a convenience sample^{101,129}. This, and due to fewer eligible women during the study period, did not make purposive sampling possible. We asked all women whose names we got for inclusion, but we do not know whether all eligible women were asked by the clinic about participation in the study. In total, ten women were interviewed, and these interviews reflected a diversity and contributed rich stories to the data set. As a result, fewer interviews were required to gain a rich data set.

6.2 GENERAL DISCUSSION OF MAIN FINDINGS

Before using a questionnaire, validity and reliability are discussed and assessed. In Study I, a large number of studies/instruments were identified, and we did an inventory of all the instruments. When choosing a suitable instrument for a study, there are many aspects to consider. Foremost are the validity and reliability of the instrument. Validity refers to whether the questionnaire measures what it is intended to. Reliability refers to whether the variables are consistent on repeated measurements¹³⁷. If an instrument is of poor quality and does not test what it is intended to, there is a risk of bias in the results. Choosing the most appropriate instrument for a researcher or clinician can be difficult. The results of Study I, where we assessed the development of the instrument as well as the psychometric testing had been done, can aid in that process.

Instruments measuring quality of life and different aspects of people's experiences are important, as they give us an easy way to, at a general level, compare outcomes in studies and evaluate care⁹⁰. This was done in Study II, where childbirth experiences between two randomised groups were compared. We used CEQ2, a revised version of one of the instruments identified in Study I. As it is a multidimensional instrument, it might give a more negative picture of the childbirth experience because more dimensions of the childbirth experience are explored¹³⁸. The scores presented in the results of Study II are in accordance with previous studies that used CEQ2^{118,119,139}. The results from Study II show that for the participants in SWEPIIS, induction did not have an effect on their childbirth experience.

Studies II–III in this thesis focussed on the childbirth experiences of women that participated in SWEPIIS. Women's childbirth experiences are individual and complex life events that women carry with them throughout life. It can be an empowering experience contributing to self-confidence and self-esteem^{6,7}. The aim of Study II was to compare differences in the childbirth experience between the two groups, and, in Study III, to gain a deeper understanding of the experience of induction. Prior studies have shown that induction of labour and complications during childbirth can affect the childbirth experience negatively⁸²⁻⁸⁴. In SWEPIIS, there were no significant differences, except for a small difference in the dimension of participation, in the outcomes of the two randomised groups⁸⁹. Due to the study design, more women had induction of labour and longer labour in the induction group than in the expectant management group.

In Study II, the results between the two randomised groups showed no difference in the overall childbirth experience, total CEQ score, or overall childbirth experience as measured with the VAS. Dimensions in CEQ2¹¹⁹ address own capacity, professional support, perceived safety, and participation. CEQ2 has been shown to discriminate between known groups; for example, multiparous women score higher than primiparous, and women with uncomplicated birth score higher than women having complications. In SWEPIS, there were no differences in mode of birth or perinatal morbidity between the two randomised groups. Therefore, it was not unexpected that the results would differ between the groups. However, the women randomised to induction of labour in gestational week 41 scored higher in the participation domain. All women who answered the questionnaire got an extra visit to a midwife when being randomised. During this visit, they obtained extra knowledge about different induction methods and what to expect during an induction. This extra information about the different procedures with induction might have made the women feel that they participated to a greater extent, meaning they had good knowledge about the different procedures; in addition, they may have got the intervention that they hoped for in the randomisation. Thus, the results of Study II suggest that for women who wish to have induction of labour, it does not, on a general level, affect the childbirth experience.

The women participating in Studies III and IV, were chosen in very different ways. The women participating in Study III actively sought to participate in SWEPIS, hoping for induction at an earlier stage (week 41) than was routine in Sweden at the time (week 42). By contrast, the women in Study IV actively chose to postpone induction of labour a bit further to see whether labour would start spontaneously, after routines had been changed and women were offered induction at week 41.

This thesis is about women's experiences and perspectives of giving birth in late- and post-term pregnancy. Of course, there needs to be ongoing discussion of the benefits and/or disadvantages of induction in late-term pregnancy. The WHO recommends induction of labour in week 41 but only in settings where gestational age can be reliably estimated with an appropriate method using ultrasound scan. The evidence for the recommendation for this intervention is considered low¹⁴⁰. There is evidence that inducing labour in week 41 reduces stillbirth. However, the risk of stillbirth is low, and the intervention will be performed in a large group of women^{67,140,141}. However, after Swedish clinical routines changed in 2019 and more women received induction of labour, the prevalence of caesarean section has increased without lowering perinatal death⁵⁵. This needs to be further studied.

We have well-developed maternity care in Sweden with some of the best outcomes regarding mortality for mother and child, and almost all births occur at hospitals. For centuries, a medical and more positivistic view has dominated research concerning pregnancy and childbirth. Davis-Floyed⁴⁷ describes the technocratic view, which is a medicalised way of regarding the birth process. It should follow certain patterns, and maternity personnel are in control⁴⁷. However, there is a lot that is problematic in referring only to this view. A medicalised view tends to focus on symptoms and physical outcomes of the mother and child, which are fundamental. However, a broader and more holistic view of childbirth is needed where women's childbirth experiences are also considered. The studies in this thesis focus on women's birth experiences and perspectives, thus contributing to a more holistic view of childbirth. However, the results of Study III indicate a medicalised view⁴⁷ on childbirth where maternity personnel control labour. Hence, it was not a normal physiological birth due to induction of labour. The women anticipated following routines and guidelines at the hospital ward and induction and labour progressing in a certain timeframe. According to the findings from Study III, the women adapted to the new circumstances described as 'birth becoming another journey'. This can be interpreted in light of the research of Newnham et al.⁴⁸ that describes how sociocultural norms and beliefs influence maternity care at a hospital ward, addressed as the 'paradox of the institution'. Interventions done to control labour and make labour safe for women can create new risks as mothers are rushed through labour and birth⁴⁸.

In addition to the medical perspective on childbirth, there is also an existential perspective on childbirth including the sacred and existential aspects of the birth experience¹⁴²⁻¹⁴⁴. It is a powerful and special mood or atmosphere surrounding birth that is vulnerable and sacred, one that can be affected by the care given¹³. In Study IV, in the first theme, 'well-being and trust in the own body's process', it comes forward how the women looked forward to labour and the birth of their child with anticipation and joy. In the last theme, 'the embodied experience of giving birth', the overwhelming and emotional feelings when the baby was born are described, enabled through a positive birth experience with confidence in the birth process. In the midwifery model of woman-centred care (MIMO)¹⁴⁵, actions taken by the midwife are described as a balancing act and as promoting a birthing atmosphere that can support the woman to feel calm, trust, safe, and strengthened while supporting normality. This is in line with the ICM's International Code of Ethics for Midwives, where there is a statement on how midwives are to respond to the psychological, physical, emotional and spiritual needs of women in their care¹⁴⁶. These existential dimensions of birth are described by the women in Study IV. However, in Study III, the women handed themselves over, and the birth

became something managed by the hospital and personnel. At the same time, something lingered in the back of the women's minds, that something might be lost, the loss of a natural birth. Therefore, when caring for women having labour induced, midwives should be aware of these facts and support women's own participation. No matter how the childbirth experience is perceived, it will, at some level, be an existential and life-changing experience.

Childbirth is a sensitive physiological process, with oxytocin being one of the main hormones affecting the process³². We learned about oxytocin in the early 20th century¹⁴⁷. However, the sensitivity of the childbirth process was known long beforehand. In 1606, court midwife Louise Bourgeois authored one of the first textbooks on the art of midwifery. The main thing that could be done to ensure a healthy birth was to ensure the mother felt safe and to guard such that there would not be any disturbance during the birth. All disturbances with the normal birth process should be avoided for as long as possible. Nature would handle most, if only given sufficient time^{148,149}. This has changed, and now we do a range of interventions to control labour. These interventions tend to lead to additional interventions and to risks of complications^{45,46}. Today, we have possibilities to medically treat complications not affecting the outcome 'healthy mother and baby'. However, with medical advances, interventions like the induction of labour have become much more common. Research on the hormone oxytocin has shown how beneficial endogenous oxytocin is during birth, affecting not only contractions but also how pain is perceived and mother-baby attachment³⁰. All interventions during childbirth may negatively affect endogenous oxytocin levels; therefore, it is important to always consider whether an intervention is beneficial for the mother and baby. We need to consider what we are doing when inducing birth. It is still too early to see the long-term effects. And, just as Louise Bourgeois questioned disturbance of the birth process in normal birth, which back then often was the safest practice, we need to consider for whom we do the intervention, as there is something more to birth than just a baby being born^{51,144}.

7 CONCLUSION

This thesis provides new knowledge relating to women's childbirth experiences in late- and post-term pregnancy. It provides new insights into how induction of labour can be experienced in late- and post-term pregnancy as well as experiences and perspectives in wanting to await spontaneous onset of labour. The findings emphasise the importance of maternity personnel listening and attending to the needs of the individual woman in late- and post-term pregnancy. This can be done by ensuring that pregnant women receive women-centred care and that maternity care provides safe care adjusted to those needs. The included studies can aid maternity care personnel in gaining a deeper understanding and enabling more individualised care when meeting women's individual needs in the life-changing and existential period that giving birth and becoming a parent is.

8 FUTURE PERSPECTIVES

This thesis does not address the childbirth experience from the perspective of partners or families. Studies looking into partner experiences and supporting roles in late-term pregnancy and induction are needed. Furthermore, it would be of value to study how midwives and obstetricians experience the induction of labour in late- and post-term pregnancy.

The search for Study I was done in 2016, and the article was published in 2017. In the 6 years since the search was done, new instruments have been developed, and several of the instruments included might have been further evaluated. This is an upcoming project for me. Also, further psychometric studies to evaluate the VAS in relation to its cut-off of 8-10 for a very good experience are needed.

There is also a need to study how the new guidelines regarding the management of late-term pregnancy affect women's childbirth experiences and outcomes for mother and baby. It would be interesting to further investigate concepts of risk and safety in childbirth in relation to induction and late-term pregnancy, both from the perspective of maternity personnel and from the perspectives of the women giving birth and their families.

A positive childbirth experience and normal birth for the first-time mother is utmost important, as it sets much better prerequisites in subsequent pregnancy and birth. Further studies are needed to see how inductions can be performed to facilitate spontaneous vaginal birth and a positive childbirth experience in this group of women.

TACK

Det här avhandlingsarbetet hade inte varit möjligt utan alla de fantastiska människor jag träffat under dessa år som har bidragit med sin kunskap, sitt stöd och peppat mig med energi under dessa intensiva år.

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APPENDIX

Childbirth Experience Questionnaire – CEQ2

Svensk version

1. Förlossningen gick som jag hade tänkt mig.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

2. Jag kände mig stark under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

3. Jag kände mig rädd under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

4. Jag kände mig duktig under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

5. Jag var trött under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

6. Jag var glad under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

7. Jag kände att jag hanterade situationen bra.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

8. Jag önskar att personalen hade lyssnat mer på mig under förlossningen.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

9. Jag deltog i beslut om min vård och behandling så mycket som jag önskade.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

10. Både jag och min partner blev bemötta med värme och respekt.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

11. Under vårkarbete och förlossning fick jag den information jag behövde.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

12. Jag hade önskat mer närvaro av barnmorskan under förlossningsarbetet.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

13. Jag hade önskat få mer uppmuntran av barnmorskan.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

14. Barnmorskan förmedlade en atmosfär av lugn.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

15. Barnmorskan hjälpte mig att hitta min inre styrka.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

16. Mitt intryck av den medicinska kompetensen gjorde mig trygg.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

17. Jag har många positiva minnen från förlossningen.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte
alls

18. Jag har många negativa minnen från förlossningen.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte alls

19. En del minnen från förlossningen kan få mig att känna mig nedstämd.

Stämmer
helt

Stämmer
delvis

Stämmer inte
särskilt bra

Stämmer inte alls

20. Sammanfattningsvis, hur smärtsam upplevde du förlossningen?



Ingen
smärta

Värsta
tänkbara
smärta

21. Sammanfattningsvis, hur mycket kontroll kände du att du hade under förlossningen?



Ingen kontroll
alls

Fullständig
kontroll

22. Sammanfattningsvis, hur trygg kände du dig under förlossningen?



Inte alls
trygg

Fullständigt
trygg