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A mixed methods study

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A MIXED METHODS STUDY

BY
INGRID JEPSEN

DISSERTATION SUBMITTED 2017

AALBORG UNIVERSITY
DENMARK

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Dissertation submitted January 2017

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CV

Ingrid Jepsen graduated as a midwife in 1986. From 1986-2001, she was employed in the maternity ward at Aalborg University Hospital. She worked as a practicing midwife in standard care, team-midwifery care, and in postnatal care. In 1990, she also was employed for 11 months as the Clinical educator responsible for midwifery students' clinical education, and in 1996 she was a lecturer in the midwifery department for 10 months.

From 2003-2006, she obtained a Health Diploma and a Master of Public Health. The master's project was an epidemiological and economic investigation of the use of epidural analgesia as a painkiller during childbirth. Supplementary to her dissertation, she initiated a research study in 2009 on women's experiences of epidural analgesia. This research was published in *Women and Birth* in 2014.

In 2008-2009, she chaired the committee developing a new National circular for midwifery education in Denmark.

In 2010-2011, she worked for 10 months as leader of the midwifery department at University College Northern Denmark (UCN). During this time, she initiated and implemented a project on common study groups for lecturers and students.

From 2001 to the present, she has been a senior lecturer in the Midwifery Department at UCN.

Because of the epidural project, she became interested in investigating phenomena from additional perspectives, and the need for a Danish evaluation of caseload midwifery was obvious. Finally, in February 2014, she enrolled as a PhD student in the Department of Clinical Medicine, Aalborg University.

ENGLISH SUMMARY

Caseload midwifery is a model of care that provides continuity of care by allowing women to have a midwife they have known throughout pregnancy attend them during labour and birth.

In Denmark, caseload midwifery is still expanding, but no Danish studies have addressed the outcomes of labour or the experiences of women and their partners. Further, only one study about midwives' experiences has focused on caseload midwifery.

International research has demonstrated that caseload midwifery is rewarding for pregnant women and midwives, and improves labour outcomes, but there are also contradictory statements about midwives' experiences. Further, no studies have investigated the experiences of the women's partners.

Therefore the overall aim was to expand the understanding of the complexity of caseload midwifery by integrating findings from both qualitative and quantitative research. This led to a mixed methods investigation in which four different studies were designed to address different perspectives of caseload midwifery.

Initially, the researcher explored midwives' experiences through participant observations in antenatal clinics, followed by interviews with caseload midwives (Study 1). This study inspired a survey on burnout that used a validated questionnaire (Study 2). Thereafter, the researcher conducted participant observations during labour to explore couples' experiences, followed by interviews (Study 3). Concurrently, Study 4, a register-based cohort study, involved the collection of three years of data from the obstetric database.

Study 1 demonstrated that caseload midwifery is a work form that entails an inherent and inevitable commitment that motivates the midwife to do her utmost and, in return, receive appreciation, social recognition, and meaningful job. There is a balance between having a meaningful job and the midwives' personal lives, but caseload midwives found that the benefits outweighed the disadvantages.

Study 2 showed that caseload midwives reported less burnout than did those who worked in standard care.

Study 3 found that caseload midwives involved the partners during labour and births. Couples experienced the early phases of labour as unproblematic, and the transitions during pregnancy and labour were facilitated by the personal relationships that this model of care facilitated. The relationship between the midwife and couple was regarded as a professional friendship characterised by

equality. Couples indicated that they were disappointed if their expectation of having a known midwife during pregnancy, labour and birth was not met.

Study 4 showed that, in general, the outcomes of labour were good compared to those in other countries. In comparing caseload midwifery and standard care within this setting, the outcomes were equivalent with respect to elective Caesarean section, epidural analgesia, preterm births, induction of labour, dilatation of cervix at admittance, and amniotomy. However, although the differences were small, caseload midwifery included shorter labours and higher rates of augmentation. Emergency Caesarean sections were also increased but this could partly be explained by distance to hospital. Further, caseload midwifery appeared to have a negative influence on neonatal outcomes.

The results/findings from the four studies were integrated during interpretation, and four themes emerged: "Well-being in Caseload midwifery," "A positive cycle in caseload midwifery," "Drawbacks in caseload midwifery," and "A negative cycle in caseload midwifery."

In conclusion, caseload midwifery leads to a positive cycle in which well-being is associated with close relationships that lead to multiple considerate acts. Low levels of burnout confirmed this well-being. However, there also are drawbacks that indicate the importance of the midwife's ability to cope with the serious obligations of caseload midwifery. Moreover, the shared decision approach might contribute to a more active approach to labour, especially among multiparous. Finally, the organisation of this model of care needs consideration, because a high on-call workload, long calls, and being superseded by a midwife unknown to the woman might put pressure on the midwife to hasten labour to be ready for the next woman.

DANSK RESUME

Kendt jordemoderordning er en model for jordemoderomsorg, der skaber kontinuitet, idet kvinden i graviditeten møder de jordemødre, der kan have vagt, den dag hun skal føde.

I Danmark udbredes kendt jordemoderordninger, på trods af der hverken findes dansk forskning omhandlende kvindernes og partnernes oplevelser af at være med i en kendt jordemoderordning eller forskning angående udfaldet af fødslerne. Forskning vedrørende jordemødres oplevelser er meget begrænset, idet der kun findes én undersøgelse, som inddrager jordemødre. Denne fokuserer dog på implementering af kendt jordemoderordning.

International forskning viser, at kendt jordemoderordning er fordelagtig for både jordemødre og kvinder, men litteraturen viser tillige, at jordemødre også kan have negative oplevelser af denne arbejdsform. Hvordan kvindernes partnere oplever kendt jordemoder er ikke undersøgt. I forhold til udfaldet af fødslerne viser internationale studier et fald i både interventions- og komplikations-rate.

Formålet med denne afhandling var at udvide forståelsen af kompleksiteten i kendt jordemoderordning i en dansk kontekst. Dette formål førte til en mixed metode undersøgelse, hvor fire forskellige studier havde til formål at undersøge fire forskellige perspektiver på kendt jordemoder.

Jordemødres oplevelser af at arbejde som kendt jordemoder blev udforsket gennem deltager-observation i jordemoderkonsultationerne efterfulgt af interviews af de observerede jordemødre (studie 1). Studie 1 blev efterfulgt af en udbrændtheds undersøgelse, hvor et valideret spørgeskema blev anvendt (studie 2). I studie 3 blev parrenes oplevelser af kendt jordemoderordning udforsket gennem deltagerobservation under fødslen samt efterfølgende interviews. Sideløbende blev register-data til studie 4 indsamlet over en periode på tre år.

Studie 1 viste, at kendt jordemoderordning var en arbejdsform med en integreret og uundgåelig følelse af forpligtelse, som fik jordemoderen til at yde sit bedste for til gengæld at få påskønnelse, social anerkendelse og et meningsfuldt arbejde. Der var en hårfin balance mellem det meningsfulde arbejde, den ukendte arbejdstid samt ulemperne i forhold til jordemoderens privatliv. Jordemødrene fandt, at fordelene opvejede ulemperne.

Studie 2 viste, at jordemødre i kendt jordemoderordning scorede lavere i udbrændtheds-undersøgelsen sammenlignet med andre jordemødre.

Studie 3 viste, at i kendt jordemoderordning, oplevede partneren at blive anerkendt og inddraget af jordemoderen. De tidlige faser af fødslen blev oplevet som

uproblematiske, og transitionen igennem graviditet og fødsel blev faciliteret af den røde tråd, som kendt jordemoderordning frembragte. Forholdet til jordemoderen blev betragtet som et professionelt venskab præget af lighed og rummelighed. En følelse af at blive svigtet af jordemoderen kunne opstå, hvis parrets forventninger om at have en kendt jordemoder under fødslen ikke blev opfyldt.

Studie 4 viste, at generelt set var udfaldet af fødslerne i dette studie bedre end udfaldet af fødsler i andre landes kendt jordemoderordninger. Når kendt jordemoderordning blev sammenlignet med konventionel omsorg lokalt, var der ingen forskel i forhold til elektiv kejsersnit, epidural analgesi, præterm fødsel, igangsættelse, dilatation af livmoderhalsen ved indlæggelse, og hindesprængning. Men, selvom forskellene var små, var der signifikant flere ve-stimulationer og akutte kejsersnit blandt kvinder i kendt jordemoderordning. Dog kunne de flere kejsersnit blive delvis forklaret af afstanden til fødestedet. Derudover var der en negativ påvirkning af det neonatale udkomme i forhold til lavere Apgar efter 5 minutter.

”Narrative weaving” og ”joint displays” blev anvendt i integrationen af de 4 studiers resultater og ledte til nye mixed-metode fund: "Trivsel i kendt jordemoderordning", "En positiv cirkel i kendt jordemoderordning", "Ulemper i kendt jordemoderordning ", og "En negativ cirkel i kendt jordemoderordning ". Disse fund udvidede vores forståelse af kompleksiteten i kendt jordemoderordning.

Konklusionen er, at der opstår en cirkulær proces, hvor tætte relationer fører til trivsel og velvære, der medfører hensynsfulde handlinger der igen medfører trivsel og velvære. Denne positive virkning bekræftes af en lav grad af udbrændthed. Det er dog vigtigt også at fremhæve ulemperne, idet jordemoderens evne til at håndtere den stærke forpligtigelse i kendt jordemoderordning synes central for den gode balance mellem arbejde og privatliv. I den sammenhæng antydes det, at tætte relationer og fælles beslutningstagning kan bidrage til at forklare den mere aktive tilgang i kendt jordemoderordning specielt i forhold til flere-gangs fødende. Vilkårene for kendt jordemoderordning bør dog i denne sammenhæng også overvejes, idet et stort arbejdspres, mange timer på kald, lange kald og det at skulle afløses af en jordemoder, der ikke kender parret kan medføre, at jordemoderen forsøger at afslutte fødslerne hurtigt, således at hun kan være klar og udhvilet til den næste fødende.

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LIST OF PUBLICATIONS

Paper 1 (1):

Jepsen I, Mark E, Nohr EA, Foureur M, Sorensen EE. A qualitative study of how caseload midwifery is constituted and experienced by Danish midwives.
Published in *Midwifery*. 2016 May; 36:61-9.

Paper 2 (2):

Jepsen I, Juul S, Foureur M, Sørensen EE, Nøhr EA. Is caseload midwifery a healthy work-form?–A survey of burnout among midwives in Denmark.
Published in *Sexual and Reproductive Health*. 2017 March: 102-6

Paper 3 (3):

Jepsen I, Mark E, Foureur M, Nohr EA, Sorensen EE. A qualitative study of how caseload midwifery is experienced by couples in Denmark.
Accepted for publication, article in press. *Women and Birth*. September: 2016.

Paper 4:
Jepsen I, Juul S, Foureur M, Sørensen EE, Nøhr EA. Labour outcomes in caseload midwifery and standard care. A register-based cohort study in Northern Denmark .
Submitted to *BMC Pregnancy and Childbirth*. January 2017

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Chapter 1. INTRODUCTION

Caseload midwifery is a model of midwifery care that focuses on continuity of care during pregnancy, childbirth, and the postnatal period (4). Caseload midwifery influences midwives, women, and their partners, as well as labour outcomes. The aim of this dissertation was to expand the understanding of the complexity of caseload midwifery.

Caseload midwifery has been implemented and expanded in Denmark based on results from international research that has shown its benefits. However, nationally, it is uncertain how midwives thrive in caseload midwifery (5), because not many apply for jobs when a vacancy appears in caseload midwifery. Couples are believed to thrive in this model of care as well, but there is no Danish research in the area. Further, there have been no studies of the effects of caseload midwifery on labour outcomes in Denmark.

Internationally, most studies have found that midwives thrive in caseload midwifery (6, 7), although some have found a risk of compassion fatigue or even burnout (8, 9). Women find caseload midwifery attractive (10-12), but the way in which it influences the experiences of their partners is unknown. Further, most studies have found that caseload midwifery leads to improved labour outcomes, as the intervention rate decreases and more spontaneous labours are registered in caseload midwifery than in standard care (13-16).

However, the ability to generalise international findings to a Danish context is low, because midwifery is organised differently, midwives play different roles, and the Danish model of caseload midwifery differs from international models. Therefore the motivation for this dissertation was the need for Danish research about midwives', women's, and partners' experiences with caseload midwifery, as well as research that investigates whether caseload midwifery improves labour outcomes in the Danish context.

Chapter 2. BACKGROUND

This chapter describes the international and national development of caseload midwifery, as well as caseload midwifery and standard care in the North Denmark Region. A review of international research on three aspects of the outcomes of caseload midwifery follows this section: Midwives' experiences of working in caseload midwifery, Women and partners' experiences of caseload midwifery, and Labour outcomes in caseload midwifery compared to standard care. Finally summary and dissertation rationale are condensed.

All references were identified using a systematic literature search in relevant databases or free internet text searches (Appendix A).

2.1 INTERNATIONAL AND NATIONAL DEVELOPMENT OF CASELOAD MIDWIFERY

The closure of small birth units and subsequent depersonalization of labour in centralised, large birth units has led to a movement towards continuity of care to improve midwifery care and support spontaneous labour (17-19). In 1988, a Randomised Controlled Trial (RCT) in the UK, "The know your midwife scheme," found that when a team of four midwives provided care during pregnancy and childbirth, labour outcomes were characterized by fewer obstetric interventions (20). In 1994, the changing concept of childbirth in the UK led to a trial on one-to-one care in midwifery (21), which showed that the rate of interventions during childbirth decreased without compromising safety. Further, New Zealand had already implemented a continuity of care model in 1990 in response to consumer demand (22).

Continuity of care in midwifery, also referred to as women-centred care, has been achieved by reorganizing midwives' work form. In the UK, Australia, Ireland, Canada, New Zealand, Sweden, Norway, and Denmark, women-centred care has been applied through different models of midwifery care that are referred to most often as caseload midwifery (17, 22-27). An international definition of caseload midwifery stated that the focus is on continuity of care, ensuring that each childbearing woman receives care during pregnancy, childbirth, and the postnatal period from one or only a few known midwives (4). The underlying philosophy is "continuity of carer" (28), in which one midwife is the primary caregiver for a caseload of women. The primary midwife is supported by one or a few midwives (4, 15, 29).

Women who do not participate in a special model of care are allocated to conventional (standard) care. Internationally, standard care in midwifery is organised, practiced, and performed differently. Therefore, childbearing women have different opportunities for antenatal care according to who they visit and the number of visits, as well as different choices of care during labour and the postnatal period. In Australia, different professionals see women during pregnancy, labour, and postnatally, and the care is not standardised (15). In New Zealand, women choose a midwife, a general practitioner (GP), or an obstetrician as their lead Maternity Carer (LMC) during childbirth (30). In the UK, standard care is a mixture of different healthcare professionals who meet the women during labour and pregnancy (31). However, these different models of standard care have in common that the woman most often does not know the midwife who attends her during labour, while the point in caseload midwifery is that the woman knows the midwife, who provides continuity of care.

Until the middle of the last century in Denmark, only 20% of midwives worked at a hospital (32). Instead, they were self-employed as district midwives and cared for women who lived in their district during pregnancy and childbirth. At that time, midwifery was regarded as a lifestyle, and the midwife always was on call for her patients (32). In 1969, 80% of Danish midwives were self-employed, but in 1974, the organisation of midwifery care changed fundamentally in response to demands from society, and from some midwives (32, 33). Childbirth was hospitalized, and midwifery consultations were conducted in public midwifery centres (32). Some midwives appreciated this new organisation because they now had regular working hours, vacations, and fixed salaries (34). However, others longed for the former, more personal contact with mothers and families (35).

In 1992, there were 67 birth units in Denmark (36), while today, there are only 24 (37). Historically, small birth units were geographically located in smaller towns, and the women often knew the group of midwives who worked at the local hospital (32). The centralisation of childbirth in large birth units today means that the women do not know the midwives, because these units serve a geographically wide area, and there are many midwives in each birth unit (32).

Over the past decades, midwives have discussed the movement to centralise births in large birth units (32). As early as 1990, the consumer magazine, *Parents and Births*, highlighted the importance of knowing the midwife (38), and in 1992, the Midwifery Union and a consumer organisation initiated a hearing about the "known midwife" concept (32). In the Northern part of Denmark, caseload midwifery was introduced as a pilot scheme in 2004 (25), and a minor evaluation report showed positive results on the part of both women and midwives (39). Caseload midwifery

expanded, and in January 2013, there were 8 caseloads located on the periphery of two births units in North Denmark.

2.2 CASELOAD MIDWIFERY AND STANDARD CARE IN THE NORTH DENMARK REGION

In Denmark, caseload midwifery is available to only a minority of pregnant women (1). In the North Denmark Region, 20.4% of pregnant women receive caseload midwifery care (Paper 4). Nationally, 61% of all maternity units have implemented some form of caseload midwifery care, but only for a smaller group of pregnant women (1).

In the North Denmark Region, caseload midwifery is located in smaller towns peripheral to two maternity units, and is the only care available in these areas. All midwives are employed at hospitals in which they choose to work in caseload midwifery or standard care. The salary includes a base annual pay supplemented by a fixed additional pay in caseload midwifery, while in standard care, additional pay for working in shifts, etc., supplements the base annual pay.

Continuity of care during pregnancy and childbirth characterises caseload midwifery. Antenatal care is located in antenatal clinics in smaller towns peripheral to the two maternity units. In standard care, pregnant women often meet the same midwife during consultations conducted in a midwifery centre, but most often a random midwife attends them during labour. Postnatally, both caseload and standard care midwives have only one contact with the woman and her partner.

Most of the caseloading midwives work in pairs where both midwives act as primary caregivers for the woman. They are on call for a week, and then they have 6 days off duty followed by a day in the antenatal clinic. This consultation day is the separating day between work and leisure time. Both midwives are if possible present during consultations in order to get to know the women. A woman joining a caseload receives the midwives' phone number at her first visit to the midwife. The woman is informed to contact the caseloading midwife on call if she experiences complications, labour onset or just needs to talk to a midwife.

In standard care, midwives know their work scheme four weeks ahead and work 37 hours per week. Most midwives work in the central antenatal clinic for one day a week, where they follow pregnant women throughout their pregnancies. A woman in standard care is told to contact the labour ward if she experiences complications,

labour onset, or needs to talk to a midwife. In the case of complications, midwives in both models of care have the same opportunity to refer to specialists.

Standard care and caseload midwifery reinforce each other; if the caseload midwife has worked for many hours and needs to rest, midwives in standard care take over. Caseload midwives also can be required to work in standard care if all available midwives are occupied.

2.3 MIDWIVES' EXPERIENCES OF WORKING IN CASELOAD MIDWIFERY

Many midwives thrive in caseload midwifery because of continuity of care, flexibility, and positive work-life balance (6, 12, 28, 40-42). *The British Journal of Midwifery* stated that this model of work is preferable and can even enhance family life (43); another study found that midwives can practice autonomously and experience flexibility because of their supportive partnerships with their colleagues (41). Most often, midwives who work in caseload midwifery self-select this work (12, 28, 40-42).

However, secondary traumatic stress as a consequence of the close relationship to the woman also has been documented in caseload midwifery (44). Studies have claimed that caseload midwifery may result in stress because midwives' experience an excessive obligation to be there for their women (8, 40, 45, 46). Stressed midwives and burnout also have been found when the effort outweighs the benefits (8, 9). Therefore, midwives' experiences of this work vary.

In Denmark, the anticipation is that both women and caregivers benefit from caseload midwifery (47). However, *The Danish Journal for Midwives* raised questions about caseload midwives' well-being (5). Further, midwives discussed and highlighted the challenges of caseload midwifery at the Danish Midwifery Congress in 2014 (48). In a Danish evaluation report, midwives reported worries about dependency of their job, and the unpredictable and sometimes long calls (34). However, at the same time, midwives enjoyed increased involvement and work satisfaction (34).

A large population survey, "Project of Burnout, Motivation and Job Satisfaction" (PUMA) (49), conducted in 1999-2005 in the public services sector in Denmark, found that midwives had the highest levels of burnout of all professions in the study (49). In the PUMA study the core-concepts of burnout were fatigue and exhaustion and furthermore the questionnaires were mailed to people who were working (50), which underscores the fact that burnout is associated with feeling exhausted but is not a severe psychosocial diagnosis. Additional features in the definition of burnout

were “the attribution of fatigue and exhaustion to specific domains or spheres in the person’s life” (51) pp 196-197). These specific domains were defined as personal burnout, work-related burnout, and client-related burnout (51). This definition is consistent with the concept of burnout used at the 2014 International Congress for Midwives, where findings of burnout among caseload and standard care midwives were reported (6). Among caseload midwives, international studies reported a lower level of burnout compared to those in standard care (6, 52-55). However, one study found an association between caseload midwifery and burnout (9). Whether the level of burnout among midwives has changed since the PUMA study, and the way in which the midwives’ work-form may influence it has not been investigated.

How midwives in Denmark cope with, and experience caseload midwifery is unknown. Therefore, midwives’ experiences of caseload midwifery require further investigation.

2.4 WOMEN AND PARTNERS’ EXPERIENCES OF CASELOAD MIDWIFERY

Childbearing women find caseload midwifery attractive; they want to know their midwife, and enjoy the close relationship with her, which increases their trust and confidence during pregnancy and childbirth (10-12, 56- 60). Thus, we need to understand the way in which caseload midwifery generates this feeling of trust and confidence.

Studies that have investigated the experiences of caseload midwifery have focused on women’s experiences, and those of the partners most often are not mentioned (6, 12, 28, 40-42). The majority of women have their partners present during birth, which is important, because childbirth is the beginning of fatherhood and the formation of the family (61). In general, the partner wants his own needs to be considered as well as those of the woman (61), but he may be afraid and have difficulty defining his role during labour (61-64). Some partners even express feelings of panic during childbirth if they are not involved in the care and the relationship between the midwife and the woman (65). According to caseload midwifery, it is unknown whether this model of care facilitates the partner’s ability to be supportive of the woman during childbirth. In Denmark, the partner often attends the midwifery consultations only once, and therefore, he may not feel acquainted well with the midwife.

The relationship between the woman and the midwife is strong, but the partner’s ability to be a part of this relationship is unknown and requires further investigation.

2.5 LABOUR OUTCOMES IN CASELOAD MIDWIFERY COMPARED TO STANDARD CARE

Comparisons of labour outcomes in caseload midwifery and conventional care have shown that caseload midwifery has no adverse outcomes, and most often, outcomes improve significantly (14, 15, 18, 23, 24, 66-69). A 2016 Cochrane review compared different types of continuity of care to conventional care within the same birth unit. The main findings were that women in continuity of care models were less likely to have an epidural, episiotomy, or assisted birth, and more likely to have a spontaneous vaginal birth compared to women who received standard care (11). Further, outcomes in a randomised controlled trial (RCT) that compared a random sample of women in caseload or standard midwifery service, found that women who received caseload midwifery were less likely to have a Caesarean birth, epidural, episiotomy, or an infant admitted to a special care nursery (15). Most studies compared the outcomes among women at low risk (14, 15, 23, 70, 71). However, a 2013 Australian study also included women with identified risks in caseload midwifery, with promising outcomes (13). This RCT confirmed that there were no differences between caseload and standard midwifery care with respect to mode of birth, instrumental deliveries, epidural use, or neonatal complications; moreover, the total costs per woman were lower in caseload midwifery (13). Observational studies have also shown that all outcomes with respect to complications, interventions, or perinatal outcomes were similar or better in caseload midwifery (14, 16, 68, 72).

There have been no investigations of the outcomes of caseload midwifery in Denmark until now, but a small evaluation report on caseload midwifery has been published (34). This report recommended only cautious generalisations of international findings and predicted that the differences in outcomes might be smaller in Denmark, where there is little difference between standard care and caseload midwifery (34). Generalising international findings about labour outcomes needs consideration, because the organisation of midwifery care often differs across countries. Therefore, explorations of caseload midwifery need to consider labour outcomes to ensure that all of the important perspectives regarding childbirth are included

2.6 SUMMARY AND DISSERTATION RATIONALE

International research shows that most midwives who work in caseload midwifery experience high job satisfaction and a lower level of burnout compared to those in standard care. Yet, negative reactions, such as feeling stressed or having difficulty balancing personal and professional lives have also been heard. Comparisons of

caseload midwifery and standard care have shown that women thrive in caseload midwifery, and labour outcomes seem to be improved.

Knowledge of experiences and outcomes of caseload midwifery in Denmark is lacking. The way in which Danish midwives experience caseload midwifery and whether this model of care influences their level of burnout is unknown, as is the way in which women experience caseload midwifery. Knowledge on the partner's experience in joining a caseload is lacking both internationally and nationally. Also, the outcome of labour in caseload midwifery has not been investigated in Denmark.

Generalising the findings from international studies to the Danish context is problematic, because the organisation of midwifery, midwives' roles, and midwife care differ. A thorough investigation of caseload midwifery in the Danish context in needed. This investigation requires both qualitative and quantitative research because caseload midwifery is a complex model of care that influences both experiences and outcomes of childbirth.

Chapter 3. AIMS AND RESEARCH QUESTIONS

The overall aim of this mixed methods study was to expand the understanding of the complexity of caseload midwifery by integrating findings from both qualitative and quantitative studies. Accordingly, the mixed methods research question was:
What are the experiences and outcomes of caseload midwifery in the Danish context?

The dissertation includes on four studies:

Study 1
The aim of Study 1 was to advance knowledge about the working and living conditions of midwives in caseload midwifery and the way in which this model of care was embedded in a standard maternity unit. The research questions were:

- What constitutes caseload midwifery from the perspectives of the midwives?
- How do midwives experience working in caseload midwifery?

Study 2
The aim of Study 2 was to investigate burnout among midwives – including a comparison of the level of burnout in caseload midwives and midwives working in other models of care that do not provide continuity of care. The research questions were:

- How is the level of burnout among caseloading midwives compared to midwives not providing continuity of care?

Study 3
The aim of Study 3 was to explore the way in which women and their partners experience caseload midwifery. The research questions were:

- What does caseload midwifery mean for the woman and her partner?
    - How are the early phases of labour influenced?
    - What characterises the relationship with the midwife?

Study 4

The aim of Study 4 was to describe and compare labour outcomes in caseload midwifery and standard care. The research questions were:

- What characterises women in standard care and those in caseload midwifery?
- What are the labour outcomes in caseload midwifery compared to standard care?
- How do the findings of this study compare to those from international studies?

Chapter 4. RESEARCH METHODOLOGY

This section describes the research methodology. First, the rationale for a mixed methods investigation is explained, followed by an elaboration of a mixed methods study design. Finally, the chapter presents the philosophical approach of this dissertation and the theoretical lens for the underlying studies.

4.1 THE RATIONALE FOR A MIXED METHODS INVESTIGATION

In this dissertation, the overall aim was to expand the understanding of the complexity of caseload midwifery by integrating findings from both qualitative and quantitative studies, which led to the mixed methods research question: What are the experiences and outcomes of caseload midwifery in the Danish context?

This research question includes a qualitative concept: "experience," and a quantitative concept, "outcome," which reflects the complexity of caseload midwifery and the need for both qualitative and quantitative research. Mixed methods is the right design when there is an advantage in using both qualitative and quantitative research (73-77). Creswell indicated that in mixed methods, the assumption is that the combination of, for example, personal experiences and statistical trends, will provide a better understanding of the phenomenon in question (74). In this dissertation, the combination of experiences and outcomes of caseload midwifery was intended to increase the understanding of the complexity of caseload midwifery in a way that each of the four studies alone could not.

According to Burke Johnson, practitioners find the mixed methods approach useful (78, 79). Applying a mixed methods design in this dissertation was appropriate, because caseload midwifery is a clinical phenomenon in which several perspectives interact. For example, in a maternity unit, midwives, women and partners, as well as outcome of treatments are all relevant perspectives. These perspectives are relevant simultaneously to the same phenomenon, and combined, they may offer new and expanded insights about the phenomenon. Onwuegbuzie underscored the relevance of a mixed methods study in complex investigations when he stated that mixed methods are valuable precisely because, most often, the world is not simple and therefore, clear solutions are not readily forthcoming (80).

Burke Johnson elaborated the rationale for using mixed methods further, stating that it allows the researcher to achieve deeper insight into a phenomenon (79). Deeper insight is achieved by integrating findings from different studies, which is the

overall purpose of using mixed methods (73, 74, 80). Thus, the findings of the four studies were integrated to fulfil the aim of this dissertation.

Mixed methods design is still in the stage of development and therefore, its vocabulary also is still being refined. The vocabulary for the integration of findings in this dissertation followed that in Fetters' work (73), who indicated that mixed methods studies can be integrated at the levels of: design, method, and interpretation and reporting (73). The level of integration depends on the design of the investigation which is described in the next paragraph.

4.2 MIXED METHODS STUDY DESIGN

Multistage study design

This investigation used a multistage mixed methods design, in which each component can be a study in itself (81), as in this dissertation. Researchers who employ mixed methods often use "stages" to describe the steps in an investigation: "a qualitative stage" or "a quantitative stage," and "phases" to describe the research process (73, 81). This dissertation included four studies that represented four stages, and were conducted in two phases - convergent and exploratory sequential.

Convergent phase

The convergent phase follows the basic principles of a convergent design. A convergent design includes parallel questions and independent analyses of qualitative and quantitative data, followed by an integration of findings at the level of interpretation (73, 74). Figure 1 illustrates the mixed methods design, where the parallelism in the studies is consistent with the overall convergent design. The blue arrow illustrates the core convergent design.

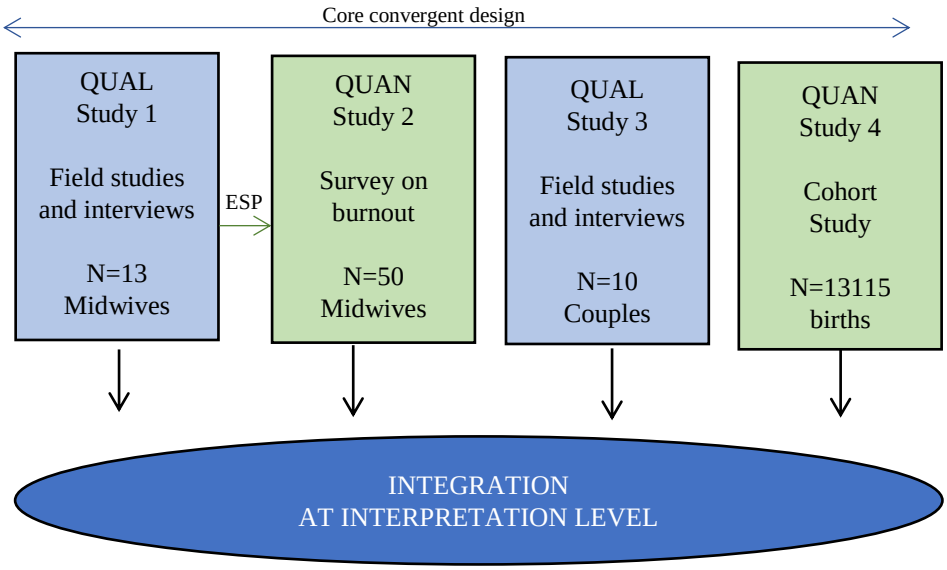
In each of the four studies, the researcher collected and analysed the data independently, and integrated them ultimately at the level of interpretation. The convergent phase lasted throughout the three-year study period.

However, because the variables in Study 4 were known before qualitative Studies 1 and 3 began, this knowledge affected data collection in the qualitative studies constructively by informing the semi-structured interview guides. This is referred to as integration at the design level, in which information from one study changes or influences data collection in a parallel study (73).

Exploratory sequential phase

An exploratory sequential phase supplemented the convergent design. The notion of "exploratory sequential" is used when findings in a qualitative study inform the approach in subsequent collection of quantitative data (73). In this dissertation, the qualitative findings of burnout in Study 1 led to a quantitative survey on burnout in Study 2. In Figure 1, the green arrow between Study 1 and 2 marks the exploratory sequential phase (ESP) and illustrates the connection. When one study informs the data collection of another study in this way, the process is referred to as integration at the method level (73)

Figure1. Illustration of mixed methods study design: A multistage framework where a core convergent design is supplemented by an exploratory sequential phase



Integration at the level of interpretation

In Figure 1, the oval symbol marks the final integration at the interpretation level. In this final step, one integrates findings from the qualitative and quantitative studies to generate new findings or consolidates others. There are three possible outcomes of the "fit" of data integration: confirmation, expansion and/or discordance (73, 74). Onwuegbuzie stated that these new findings are separate

from, and extend beyond what the qualitative and quantitative studies alone can provide (80). Therefore, the integrated analysis was designed to provide new insights about caseload midwifery and therefore enhance the understanding of the complexity of this work-form. Chapter 7 describes integration at the findings level, where the themes from the two qualitative studies are correlated with the results from the two quantitative studies.

4.3 PHILOSOPHICAL APPROACH

There are different interpretations of the overall philosophical approach to mixed methods. Creswell explained that more researchers adhere to pragmatism as the underlying philosophy, while Johnson claimed that dialectical pluralism is most often the relevant philosophical approach (82).

In this study, epistemologically different research questions demanded different research approaches based on different theories of science. This is consistent with dialectical pluralism, in which a dialogue with and between multiple epistemologies, ontologies, values, and methodologies are permitted, and where the knowledge produced is useful and accepted widely (79). Johnson regarded dialectical pluralism as a metaparadigm, an interpretation supported by other authors (77, 83). Dialectical pluralism is found to be able to embrace the different epistemologies in this study.

The critical question for the researcher was whether it is possible to master both qualitative and quantitative epistemologies, research methodologies, and methods. Onwuegbuzie stated that it is possible to shift from a qualitative to a quantitative lens through cognitive and empathic training (80), in addition, Johnson claimed that one can engage in dialectical pluralism as an intellectual process in which a person holds a dialogue with ideas, values, and differences (82). According to these authors, it is possible for one researcher to master different research approaches, but the debate underscores the fact that it is not always straightforward and one must consider its advantages and disadvantages.

In this dissertation, the broad competencies of the group of supervisors helped maintain the focus on what was particularly important to consider for the validity in the four studies, each of which required a different theoretical lens.

4.4 THEORETICAL LENS

The overall philosophical approach is dialectical pluralism where hermeneutic-phenomenology and post-positivism are the theoretical lenses for the respective qualitative and quantitative studies.

The need for different theoretical perspectives in a mixed methods investigation is consistent with the philosophical approach. Creswell indicated that beneath the philosophical approach, the researcher often takes a theoretical stance that provides direction for the phases of a mixed methods study (74).

The theoretical lens must be elaborated in qualitative research. In the search for an analytical framework that could incorporate the midwives' wide range of experiences, the researcher chose Van Manen's work. Van Manen stated that the fundamental level of human existence can be studied in its basic structure, and divided into five universal themes (84): lived space (spatiality), lived body (corporeality), lived time (temporality), lived Self-Other (relationality), and lived things (materiality) (84). These existential themes help us understand the diversity of our experiences. Further, all existential themes are productive categories for the process of questioning and analysis during participant observations and interviews, as well as between field studies and interviews (84). In general, the existentials were helpful in broadening the understanding of the complexity of the lifeworld, and therefore, they were useful as a theoretical lens.

Van Manen referred to his theoretical stance as phenomenology of practice using a hermeneutic phenomenological method: "a method of abstemious reflection on the basic structures of the lived experience" (84 p. 26). Hermeneutic-phenomenology is an extension of phenomenology that describes lived experiences, but also interprets them sensitively (74, 84). Van Manen indicated that all phenomenology (perhaps with the exception of Husserl's) includes some form of interpretation (84). The research questions in the qualitative studies addressed the experiences and meanings of being a caseload midwife, and therefore, the lived experiences were a focus, as well as the interpretation of the meaning of caseload midwifery. During the field studies and interviews, it became obvious that the participants and informants observed experienced their jobs or their pregnancies as facets incorporated in their lives and integrated with their personal selves. Accordingly, Van Manen's theoretical stance seemed an appropriate lens for the qualitative studies because of its ability to provide a deeper understanding and insightful description of the nature and meaning of our everyday experiences (85)

The difference between qualitative and quantitative research was highlighted when publishing separate papers intended for different journals and peer-reviewed by

experts in either quantitative or qualitative methodologies. As an example, the two quantitative papers, Studies 2 and 4, were not asked to report their theoretical foundations. Consistent with that, Onwuegbuzie claimed that quantitative research makes explicit the theoretical stance rarely (78).

However, the pluralistic approach indicates that multiple theories of science are at work, and therefore, the researcher also must identify the theoretical lens in the quantitative studies. Positivism typically is the theoretical stance taken in quantitative research, but Clark stated that today, positivism has been superseded by a post-positivistic approach. In post-positivist methodologies, there is an acceptance and recognition of research methods that focus on experiences or meanings of individuals (86) and that different research methods are required to answer different research questions (80, 86); this was the basic assumption in this dissertation as well.

In conclusion, the theoretical lens used in the quantitative aspects of this mixed methods investigation was post-positivistic.

Chapter 5. METHODS

This chapter elaborates on the methods used in the four studies. Table 1 provides an overview of the methods, followed by a presentation of each study; the content of this table is explained further in the text.

Table 1. Overview of methods in each of the four studies

	Study 1	Study 2	Study 3	Study 4
Approach	Qualitative	Quantitative	Qualitative	Quantitative
Design	Participant observations and interview	Survey	Participant observations and interview	Register-based cohort
Participants	13 midwives	50 midwives	10 couples	13115 birth
Setting	Antenatal clinics connected to Maternity unit A and B	Midwives working in Maternity unit A	The labour ward in Maternity unit A	Births in Maternity unit A and B
Method	Observations in antenatal clinics followed by interviews.	The Copenhagen Burnout Inventory	Observations in the delivery suite followed by interviews	Data retrieved from the local obstetric database and analysed in Stata
Data	Transcribed field notes and interviews	50 completed questionnaires	Transcribed field notes and interviews	Dataset including birth for three years
Analysis	Thematic analysis following the thinking of Van Manen	Comparing the level of burnout between caseload and other midwives	Thematic analysis following the thinking of Van Manen	Comparing the outcome of labour between caseload and other midwives

5.1 STUDY 1

Study 1 was a qualitative study that aimed to advance the knowledge about the working and living conditions of midwives in caseload midwifery and the way in which this model of care was embedded in a standard maternity unit.

Design

Participant observations and interviews inspired by practical ethnographic (87).

Study setting

The study was set in seven of eight antenatal clinics for caseload midwifery in the North Denmark Region. These clinics were located in six small towns affiliated with two maternity units, maternity units A and B, where most of the births took place.

Maternity unit A is a tertiary birth unit with approximately 3200 births a year and maternity unit B is a secondary unit with approximately 1300 a year. Both have implemented caseload midwifery, and the midwives in both were included to increase the variation and enhance the ability to generalise the findings.

Participants

This study focused on midwives who worked in caseload midwifery. Consecutive inclusion combined with a snowballing process (88) resulted in the inclusion of 13 midwives. The midwives were observed in the local antenatal clinic for 4-8 hours during one or two days prior to interviews.

Saturation (89, 90) appeared to occur after inclusion of 9 midwives. Saturation occurs when the sample addresses the study's research questions sufficiently (89, 90). However, completing all thirteen observations and interviews planned previously resulted in confirmation of findings, which in the end facilitated and strengthened the conclusions.

Methods

Participant observations and interviews

The participating midwives were observed during pregnancy consultations in the antenatal clinics. Field notes were hand-written and transcribed the same day. Participant observations inspired the researcher to create an individual, semi-structured interview guide (Appendix B). The guide also was inspired by the research available on caseload midwifery and a figurative interview guide was developed to overcome previous challenges associated with interviewing colleagues (Appendix C).

The midwives were interviewed 0-5 days after the participant observations. The interviews lasted 60-90 minutes, were recorded digitally, and transcribed verbatim.

For the articles, the researcher translated the Danish field notes and quotes into English. Anonymity and confidentiality were ensured by securing the data and coding all names.

Data

The data consisted of transcribed field notes and interviews.

Analysis 1

Coding in Nvivo helped organise and systematise the quotes and notes. The nodes were grouped in meaningful themes using Van Manen's existential themes. After grouping according to existentials, a new analysis was performed in which the themes developed during the existential analysis were combined in new subthemes that were reduced further to only a few themes; finally, the essential statement was clarified.

Role of the researcher

Participant observation needs thorough considerations according to the role of the researcher in the field (91). The researcher's role was to be passive participating which means that the researcher is present at the scene of action but without participating or interacting with other people "to any great extent" (87) p. 59.

Fieldwork requires a great deal of preliminary reflection. The researcher has to begin with a conscious attitude of almost complete ignorance (87), and therefore it is challenging to perform research in a well-known field. Honneth confirmed this and argued that the researcher has to estrange him/herself from the well-known and reflect instead on the blind spots (92). Thirteen years ago, the researcher was employed at maternity unit A for fifteen years, and thereafter, was employed in the midwifery department for thirteen years. Thus, most of the midwives in the maternity units knew the researcher. This knowledge provided easy access to the field, but also made it difficult to maintain a naïve approach (87). The supervisory group discussed preconceptions with the researcher to facilitate recognising, and attempting to bracket them thereafter (93). Previous experience conducting research in the researcher's own field (94) revealed difficulties in interviewing colleagues. Therefore, the researcher had to consider the form of the interview used. To

introduce another starting point for the interview than that of traditional questioning (Appendix B), a supplementary figurative interview guide was developed based upon existing evidence, in accordance with Van Manen's assertion that there are many methodological approaches to data collection (84). The figurative interview guide (Appendix C) was helpful, and facilitated the midwives' elaborations about working in caseload midwifery.

5.2 STUDY 2

Study 2 was a quantitative study that aimed to investigate burnout among midwives - including a comparison between the level of burnout in caseload midwives and midwives working in other models of care that do not provide continuity of care.

Design

A survey in which the validated Copenhagen Burnout Inventory (CBI) was used to measure burnout.

Study setting

This study was conducted in maternity unit A.

Participants

61 midwives in maternity unit A received a questionnaire on burnout.

Data

Fifty out of 61 midwives (82%) completed the questionnaires.

Analysis 1

Statistical analysis was performed in STATA 13. The proportional difference was used to compare dichotomized burnout scores, and independent *t*-tests were used to compare mean scores of burnout. A two-tailed *p*-value <0.05 was considered statistically significant, and 95% confidence intervals were provided when relevant.

Role of the researcher

The researcher's role was to plan and initiate the research process (80). The researcher obtained permission to use the CBI questionnaire and conduct the study in maternity unit A. The researcher invited midwives to join a research group and thereby volunteer to help with practical issues during the study. Three midwives joined the group; they printed and distributed information letters and questionnaires, and created a post box for completed questionnaires. They also checked the number of surveys completed and posted two reminders. Data were double entered into Epi-data with help from one of the midwives and thereafter the researcher performed the analysis and reported findings.

5.3 STUDY 3

Study 3 was a qualitative study aimed to explore the way in which women and their partners experience caseload midwifery.

Design

Participant observations and interviews inspired by practical ethnographic (87).

Study setting

Maternity unit A was chosen as the study setting because of geographical circumstances.

Participants

Ten caseload couples were included at the onset of labour. Five of 7 eligible caseload midwives included the couples and attended them during labour and birth where participant observations were made.

Methods

Participant observations and interviews

Six of the 10 participating couples were observed from their arrival at the maternity unit until one hour after the infant was born. Two couples were observed in part and

2 were only interviewed. Hand-written field notes were taken and transcribed immediately after the birth while the researcher waited for the opportunity to make an appointment for the interview.

A semi-structured interview guide (Appendix D) was developed. The interview guide was extended and adapted to the individual couple by the inclusion of field notes.

Digitalised dyadic (95) interviews of the woman and her partner followed the observations at a planned meeting 1-4 days after the field observations. The interviews lasted 30-50 minutes and were recorded digitally.

Field notes and interviews were transcribed verbatim. In the articles, the researcher translated the Danish quotes into English. Anonymity and confidentiality were ensured by securing the data and coding names.

Data

The data consisted of the transcribed field notes and interviews.

Analysis 1

The process of analysis was nearly equivalent to that in Study 1. Data were coded in Nvivo and the analysis followed Van Manen (84). Article (3) describes the steps in the analysis. Conducting the analysis in steps was consistent with Study 1, but Creswell's description of stepwise analysis was followed in this study, because this method of developing descriptive, as well as interpretive themes (76) was suitable for the data in the study. The essence was extracted based on the descriptive and interpretive themes.

Role of the researcher

The researcher's role resembled that in Study 1 in many ways, but in this study, participant observation was even more challenging because the researcher needed to be invited to observe childbirth, which is an intimate process. It is necessary to obtain permission before entering the field to avoid being obtrusive during participant observations (96). Therefore, to obtain permission to observe the midwives' work during childbirth, they were informed about the study in advance. Further, the researcher asked the midwives for permission to conduct observations in the delivery suite. If the midwife accepted, she informed and included couples when they phoned the midwife at labour onset. When a couple agreed to participate,

the midwife called the researcher. The midwives had received information letters for the couples in advance, and this information was elaborated when the researcher and the couples met at the hospital.

5.4 STUDY 4

Study 4 was a quantitative study aimed to describe and compare labour outcomes between caseload midwifery and standard care

Design

A register-based cohort study was used.

Study setting

This study was located in the North Denmark Region and included births in maternity units A and B. In a register-based cohort study, the number of participants is essential to be able to generalize the results, and therefore the researcher included the birth populations in both maternity units during a three-year period.

Participants

After excluding multiple pregnancies (n=253), 13115 singleton, all-risk pregnancies were included in the study.

Methods

The relevant data extraction from the database was defined in collaboration with the researcher's supervisors. The researcher and one of the supervisors (SJ) cleaned the data and generated the variables. Logical tests were performed and descriptive findings in the dataset were compared to each maternity unit's annual report on labour outcomes. The researcher obtained permission to check illogical values in the patient records, and recoded data when a clear cause was found. The researcher contacted the professionals responsible for reporting diagnostic codes in each of the two hospitals to determine the way in which ICD-10 codes were interpreted in daily practice. In some cases, codes for diagnoses and procedures were combined in meaningful variables. For example, former Caesarean section, former IUGR (Intra-

Uterine Growth Retardation), and former preterm birth were combined in the variable "Pre-pregnancy risks."

Data

Data for a three-year period were obtained from the electronic obstetric database of the North Denmark Region.

Analysis

The distinction between models of care was simplified to caseload midwifery or not, as only midwives in caseload midwifery focus on continuity of care, while all other midwives work in shifts and do not provide continuity of care.

A comparison was made between demographic characteristics and outcomes in caseload midwifery and standard care. The Chi-squared test was used for proportions, and the Student's *t*-test for data distributed normally. The Wilcoxon rank-sum test was used for data that had a non-normal distribution.

To compare interventions and labour outcomes, the researcher used either logistic or linear regression, depending on whether the outcome variable was dichotomous or continuous. Confounders were chosen *a priori*, and their identification was based on previous knowledge of their associations with exposure and outcome (97).

Throughout the study period, the confounders chosen were: maternal age as a continuous variable, parity (nulliparous vs. multiparous), maternal pre-pregnancy body mass index (BMI derived from pre-pregnancy weight and height) as a continuous variable, smoking habits (non-smoker, smoker, stopped during pregnancy), need for an interpreter (yes/no), maternity unit (A or B), grouped infant birth weight (<3,000 g, 3,000-3,999 g, ≥4,000 g), and infants' birth year (2013, 2014, 2015).

Because of the geographical determination of caseload midwifery, socioeconomic status might serve as a confounder, and therefore, in November 2014, permission was obtained to add "mother's years in school" and "level of education" to the database. These variables were grouped as "more or less than primary school" and "more or less than three years of education," respectively.

Former intrauterine growth restriction, Caesarean section, and preterm birth combined in one variable, and risk factors or complications in the current pregnancy, including malformations; alcohol or drug abuse; in vitro fertilisation; preeclampsia; hypertension; diabetes; premature contractions <37 weeks gestation;

vaginal bleeding < 37 weeks gestation; placental and uterine abnormalities, and blood type incompabilities (rhesus, ABO, platelets, hydrops foetalis, and other kinds of blood type incompabilities) were controlled for.

A number of supplementary analyses were performed to investigate the findings further. All estimates were presented with 95% confidence intervals. All statistical analyses were performed using STATA 13 (98).

The role of the researcher

As in Study 2, the researcher's role was to guide the research process. The primary role was to obtain access to data and assist in processing it. In cooperation with supervisors, the researcher performed the data analyses

5.5 OFFICIAL APPROVALS AND ETHICAL CONSIDERATIONS

The study plan was approved by the Danish data protection agency, j.nr. 2014-41-2928, and the Danish Health and Medicines Authority, Jr. Number 3-3013-582/I/.

Before initiation, the relevant authorities at the maternity units approved all studies locally. Ethical considerations were made throughout the research process, and the ethical guidelines of the Helsinki declaration (99) were followed. Danish legislation does not require ethical approval for interviews, surveys, and register studies according to "Guidelines about Notification etc. of a Biomedical Research Project" (100) Law no. 593, 14 June 2011. Section 2.7 states, "*A register research project where only information in the form of sign-based symbols, including figures, letters, etc. is applied shall not be notified to research ethics committees.*" Thus, the register-based cohort study did not require ethical approval. Section 2.8 states, "*As a starting point, questionnaire-based examinations shall be treated like the so-called register research projects i.e. that they have to be notified only if the project will include examination of human biological material or examination of individuals, cf. S. 8(3) of the Committee Act. Interview examinations are comparable to questionnaire-based examinations*," which indicates that the survey on burnout and the qualitative studies that used interviews also did not require ethical approval from the regional Health Research Ethical committee.

However, because of the more rigorous approach to ethical approval in most other countries, the researcher asked the regional Committee for Health Research for permission to conduct the research. They replied that there were "no obstructing

ethical issues in these studies," and that ethical approval was not required because of the study designs. This statement was used to inform international journal editors that Denmark does not require ethical approval for qualitative research, as well as survey or register studies.

All participants in the qualitative studies (Studies 1 and 3) received information about the studies, both orally and in writing (Appendix E and F). The Committee on Health Research suggests using the standard, ready-print declaration of consent, "Informed consent to participate in a biomedical research project" to obtain written consent (100); all participants signed this declaration (Appendix G).

In the burnout study (Study 2), the midwives received an information pamphlet (Appendix H), as well as an informational email about the study. The questionnaires were distributed in the midwives' pigeonholes and a post-box was created to collect the questionnaires completed.

The cohort study (Study 4) consisted of register-data, and except for the official approvals mentioned above, no other ethical approval was required. To secure the data, all person identifiers were removed from the dataset and the data were stored and analysed in a browser at the University College of Northern Denmark, which requires a user login and a private code to obtain access to the server and a private secured computer (100).

In all studies, anonymity and confidentiality were ensured by securing the data and coding names.

Chapter 6. FINDINGS

This chapter presents the findings of the four studies. A mixed methods integration presented by narrative weaving and joint displays follows the study-findings.

6.1 FINDINGS IN STUDY 1

Participants

The thirteen midwives in this study were in average 39 years old and had 12.2 years of experience as a midwife and 4.2 years of experience in caseload midwifery. All but one had children. Two midwives had only grown up children at eighteen years or older. The midwives were all living with a partner.

Themes

The analysis led to five main themes and finally the essence.

Having a high degree of job satisfaction

Midwives indicated that they experienced their jobs as good, meaningful, and valuable. Their high degree of job satisfaction was based upon the feeling of engagement associated with being independent and working autonomously within the public maternity ward. The midwives felt they were able to "run their own race" and challenge clinical guidelines without breaking the rules. The midwives also believed their high degree of job satisfaction was a positive consequence of being able to offer family-centred care and having enough time to provide high quality care.

Being a personalized professional

Midwives experienced the boundaries between them and their professional jobs as floating. They perceived that they were recognised as human beings with ordinary needs, and as more than just professional midwives. All of the midwives talked about their short, but intense relationships with the couples, which some likened to a legal "affair." The midwives emphasised that they worked to create a trusting relationship, and focused on involving the family in decisions.

Creating my own space

The midwives experienced their lived space differently compared to that in their former work in standard care. They felt in control and able to take the time needed because no one pushed them to finish their jobs. A space was created around the delivery suite to protect the woman, but also the midwives, as focusing on a single birth enabled them to work for many hours. At the same time, they acknowledged their dependence on the expertise in the maternity unit and their colleagues who worked in standard care.

Creating cohesiveness through knowing

Cohesiveness and its realisation were important elements in the search for constituents of caseload midwifery. The phone was a means of cohesiveness and the midwives regarded it as the woman's lifeline. The midwives always made an effort to sound welcoming and interested when they answered the phone. The midwives also created cohesiveness, as they kept an invariably up to date list in which they collected the most important information about the caseload. This list ensured that they remembered each couple.

Their close partnerships with caseload colleagues allowed the midwives to discuss and investigate situations in which they felt personally challenged by couples in the caseload. The midwives knew that they had to attend all families and these discussions helped them embrace everyone in their caseload.

Working in an obligating but rewarding job

Being known to the women was sometimes experienced as being exposed and vulnerable, as the geographically narrow catchment area in each caseload meant that people knew each other, as well as the midwife, and therefore, she had a reputation to uphold. The midwives felt an obligation to perform well and fulfil expectations to prevent any disappointment on the part of their clients. In general, they had a strong work ethic, and if they needed to rest, it could evoke a feeling that they were betraying the woman. According to their own families, they experienced that their partners (their husbands) had to be on call for the family when the midwives were on call for their caseload which underlines the all-encompassing nature of the job.

The essence

"Caseload midwifery is a work form with an embedded and inevitable commitment and obligation that brings forward the midwife's desire to do her utmost and in return receive appreciation, social recognition, and a meaningful job with great job satisfaction. There is a balance between the advantages according to the meaningful

job and the disadvantages according to their personal life, but the midwives working in caseloads found benefits to outweigh disadvantages" (1 p. 68).

6.2 RESULTS IN STUDY 2

Participants

Fifty (82%) out of 61 midwives, completed the questionnaire. Six of the midwives worked in caseload midwifery, twenty worked in standard care, twelve were working in standard care but did not do antenatal consultations and twelve combined working in different departments with doing shift work in standard care.

Results

Among all fifty midwives who completed the questionnaire a significant number of midwives reached a high score on burnout. 22% of all midwives had high burnout scores in personal burnout, 20% in work-related burnout and 10 % in client related burnout. However, caseloading midwives alone did not reach a high score on burnout in either domain.

When comparing average burnout scores across work-forms, caseloading midwives had lower burnout scores for all three domains compared to the other midwives in combination (Table 2).

Table 2) Scores of personal, work-related and client-related burnout in caseload midwives and in midwives in other work-forms (2)

	Caseload midwives (n=6) Mean (SD)	Midwives in other work-forms (n=44) Mean (SD)	*p* value
Personal burnout	25.7 (12.0)	39.3 (16.1)	0.04
Work-related burnout	19.2 (9.8)	37.2 (15.1)	0.004
Client-related burnout	10.3 (6.0)	28.8 (16.2)	<0.001

6.3 FINDINGS IN STUDY 3

Participants

All couples were female/male and lived together. The researcher interviewed them 0-4 days after childbirth. Five were primiparous and 5 were multiparous. They were attended by 5 different midwives and belonged to 3 different caseload groups in maternity unit A.

Themes

Following Creswell's description of stepwise analysis (76), answering the three research questions yielded seven descriptive themes, four interpretive themes, and finally, the essence.

Descriptive themes

The descriptive themes answered the two first research questions that addressed the couples' lived experiences in caseload midwifery.

The partner is involved

The partners acknowledged the midwives' interest in them, as the midwives called both the woman and her partner by name and could engage in small talk about the partner's job, which made the partners feel welcomed and able to relax in the labour ward. The partners trusted their wives and because these wives trusted the midwives, the partners did as well.

The partner and the woman are more than numbers

It was important to the couple that they did not feel anonymous. They felt that the midwife acknowledged and treated them as individuals. They emphasised that she always made clear appointments and kept them. They realised her responsibility and obligation, as they knew she had to answer for her actions and decisions at their meeting after the birth.

The couples and the midwife know each other

The couples appreciated that they did not have to repeat their story and that the midwife remembered their wishes for the childbirth.

Disappointment if expectations are not met

The one negative finding was that they worried about whether the midwife would be able to attend their childbirth, and were disappointed if their particular midwife was not present during labour.

A welcoming first contact by phone

Caseload midwifery had a positive influence on the early phases of labour. Phoning the midwife directly was an important and very positive experience, and they particularly regarded the midwife's expression of joy when labour started as very important.

To be met by a known friend at the hospital

The couples experienced being welcomed by a known midwife at the hospital as more important than expected, and it helped calm them. The midwives' guidance about parking in the crowded city was a small, but considerate act that made a difference to the couple.

Dealing with problems as they show up

The couple trusted the midwives and expected her to deal with problems as they arose. They primarily wanted a vaginal birth, but would accept a Caesarean section if necessary. With respect to the duration of birth, they wanted labour to be short, and several participants were surprised that the researcher questioned this issue.

Interpretive themes

Four interpretive themes were developed to answer the last research question. This analytical step illustrated the extension of phenomenology into hermeneutic phenomenology, as the researcher interpreted the way in which caseload midwifery affected the couple's relationship with the midwife and the way in which this relationship affected labour.

A relationship with a professional friend

The women and their partners experienced the relationship with the midwife as one of friendship, but they also stressed the importance of her professionalism and therefore referred to the relationship as a professional friendship. All the couples remembered the names of their caseload midwives and appreciated being involved in both the midwives' professional and more personal lives.

A relationship characterised by equality and inclusiveness

The couples felt equal to the midwife, not with respect to her job, but as fellow human beings, and couples who felt they were different or especially vulnerable experienced being included by the midwife. The couples took into account the time of day when they called their midwife, and tried to ensure that she could sleep, so that she could be there for them throughout their labour and birth.

A relationship creating a connecting thread

Couples experienced the relationship to the midwife as one that created a connection throughout pregnancy and labour and, to some extent in the postnatal period as well. Even if the midwife did not attend the birth, the care she demonstrated for the woman thereafter, by visiting, making a phone call, or sending a text, led her to remain the woman's midwife.

A navigator on the ship

The midwife was regarded as "the navigator on the ship," as she guided the women "through stormy waters."

The essence

The essential finding was that: "In caseload midwifery, the partner experienced being acknowledged and involved by the midwife. The early phases of labour were experienced as unproblematic by the couple and the transitions during pregnancy and labour were facilitated by the connecting thread that this model of care allowed to develop. The relationship with the midwife was regarded as a professional friendship characterised by equality and inclusiveness and the midwife was regarded as the navigator who guided "the ship" through "stormy waters". A feeling of being let down by the midwife could occur if the couples' expectation of having a known midwife during birth was not fulfilled" (3 p. 4).

6.4 RESULTS IN STUDY 4

Of 13,115 births, 20.4% (2,679) were allocated to caseload midwifery.

In examining the success rate of continuity of care, 78% of the caseload women had only one midwife present during labour, compared to 49% in standard care. In 95% of the caseload births, up to two midwives attended during labour by comparison to 82% for standard care births.

The mean number of midwives during labour was 1.3 (SD=0.6) in caseload midwifery, and 1.8 (SD=0.9) in standard care ($p<0.0001$).

The midwife known to the woman through pregnancy is called "primary midwife". Among caseload women, a primary midwife performed 70% of all procedures during labour and birth. For women in standard care, only 5% of procedures were performed by a primary midwife ($p<0.0001$). In addition, a primary midwife attended 70% of caseload women during childbirth.

The outcomes of labour in caseloads were compared to those in standard care (Table 3). Although crude estimates indicated that there were slightly more elective Caesarean sections and fewer epidurals and instrumental deliveries in caseload midwifery, these differences disappeared after adjustment. Further, preterm births, induced labour, dilatation of cervix at admittance, and amniotomy were similar when comparing outcomes in caseload midwifery and standard care.

More labours were augmented by syntocinon-drip, and more emergency Caesarean sections were performed in caseload midwifery. Further, more labours lasted less than 10 hours and the duration of labour was, on average, 28 minutes shorter than in the standard care group. Among caseload women, the adjusted odds for having an intact perineum after birth increased, which was attributable primarily to reduced odds for 1 or 2 degree lacerations, while there was no difference between the two groups in 3 or 4 degree lacerations.

Among neonates in the caseload group, the adjusted odds of Apgar scores < 7 after 1 minute increased, as well as the odds for Apgar < 7 after 5 minutes. Risk of low umbilical arterial pH <=7.05 pointed in the same direction but was weaker, while the number of infants with low umbilical venous pH<=7.05 did not differ between the groups. The odds ratio for transfer to NICU was slightly higher among caseload infants. There were no differences in early discharge following adjustment.

Supplementary analyses

One of the supplementary analyses showed that women in standard care who had the same long distance to the hospital as caseloading women tended also to have a similar increased risk of emergency Caesarean section. Therefore the increased OR for emergency Caesarean section can partly be explained by distance to hospital.

When primiparous and multiparous women were analysed separately, the increased OR for augmentation in the caseload group found in the main analysis, was only present for multiparous compared to primiparous women (Table 4).

The increased ORs for low Apgar scores also were attributable primarily to the greater odds among caseload multiparous births, as the increased ORs among primiparous births were modest and not significant. In contrast, the increased odds for transmission to the NICU were only present in infants of primiparous women.

Sensitivity analyses showed no significant differences

Table 3) Labour outcomes in caseload midwifery and standard care. (Paper 4)

	Caseload Midwifery	**Standard Care**	**Crude OR (95 % CI)**	**Adjusted OR* (95 % CI)**
All births =13115	**N=2679** % (n)	**N=10436** % (n)		
Elective Cesarean Section n=1020	8.4 (225)	7.6 (795)	1.11 (0.95; 1.30)	1.02 (0.86; 1.21)
Planned vaginal birth n=12095	**N=2454** % (n)	**N=9641** % (n)	**Crude OR (95% CI)**	**Adjusted OR* (95% CI)**
Birth<32 weeks	0.7 (17)	1.0 (98)	0.68 (0.41;1.14)	0.71 (0.40;1.24)
Births<37 weeks	6.9 (168)	6.6 (639)	1.04 (0.87;1.23)	1.10 (0.89; 1.36)
Induction	26.0 (639)	25.8 (2484)	1.01 (0.92;1.12)	0.99 (0.88;1.12)
Cervix <=4cm	70.1 (520)	73.0 (2572)	0.87 (0.73;1.03)	0.96 (0.80;1.16)
Augmentation **(**synt.)	22.1 (542)	21.8 (2106)	1.01 (0.91;1.13)	**1.20 (1.06;1.35)**
Amniotomy	21.5 (528)	215 (2070)	1.00 (0.90;1.12)	1.05 (0.94;1.17)
Epidural (vag. birth)	24.4 (599)	26.2 (2523)	0.91 (0.82;1.01)	0.97 (0.86; 1.08)
Emergency CS	16.5 (405)	14.5 (1393)	1.17 (1.04;1.32)	**1.17 (1.03;1.34)**
Instrumental delivery	5.8 (142)	6.5 (631)	0.88 (0.73;1.06)	1.01 (0.83;1.23)
Labour duration <=10 h	72.8 (1704)	65.6 (6079)	1.41 (1.27: 1.56)	**1.26 (1.13;1.42)**
Intact perineum	65.8 (1615)	59.8 (5766)	1.29 (1.18;1.42)	**1.17 (1.06; 1.29)**
Laceration 1 or 2	32.1 (788)	37.7 (3635)	0.78 (0.71;0.86)	0.86 (0.77;0.95)
Laceration 3 or 4	2.3 (57)	2.9 (276)	0.81 (0.60;1.08)	1.00 (0.74; 1.36)
Apgar<=7 1. minute	6.8 (167)	5.4 (518)	1.29 (1.07;1.54)	**1.32 (1.09;1.60)**
Apgar<=7 5. minute	2.0 (48)	1.3 (124)	1.53 (1.09;2.14)	**1.57 (1.11;2.23)**
Umb.ven.pH<=7.05	0.5 (11)	0.5 (43)	1.01 (0.52;1.95)	1.02 (0.50;2.07)
Umb.art.pH<=7.05	1.6 (40)	1.5 (145)	1.09 (0.76;1.54)	1.21 (0.84;1.75)
Transfer to NICU	6.2 (151)	5.5 (533)	1.12 (0.93;1.35)	1.20 (0.97;1.47)
Early discharge	33.0 (809)	30.2 (2908)	1.14 (1.04;1.25)	1.03 (0.91;1.16)

*Adjusted for maternal age, parity, maternal pre-pregnancy BMI, birth weight, smoking habits, need for interpreter, maternity unit, and birth year. Pre-pregnancy risks included: former IUGR, Caesarean sections, and preterm births. Complications during pregnancy included: malformations; alcohol or drug abuse; IVF; primiparous<20; preeclampsia; hypertension; diabetes; premature contractions < 37 weeks of gestation; vaginal bleeding <37 weeks of gestation; placental abnormalities; uterine abnormalities, and blood type incompatibilities (Rh, ABO, platelets, hydrops foetalis, and other kinds of blood type incompatibilities).

Table 4) Birth outcomes in caseload midwifery and standard care – Multiparous compared to primiparous (Paper 4)

	Primiparous		Multiparous	
	Adj. OR*	**95% CI**	**Adj. OR***	**95% CI**
Augmentation	1.05	0.90;1.21	1.49	1.24;1.80
Emergency CS	1.11	0.93;1.32	1.31	1.04;1.56
Apgar=<5 (5 min.)	1.43	0.89;2.29	1.69	1.01;2.83
Umb. art. pH<7.05	1.02	0.62;1.69	1.41	0.81;2.46
Transfer to NICU	1.33	1.01;1.74	0.98	0.74;1.31
Labour<=10 hours	1.29	1.12;1.49	1.22	1.02; 1.46

**Adjusted for maternal age, parity, maternal pre-pregnancy BMI, birth weight, smoking habits, need for interpreter, maternity unit, and birth year.
Pre-pregnancy risks included: former IUGR, Caesarean sections, and preterm births.
Complications during pregnancy included: malformations; alcohol or drug abuse; IVF; primiparous<20; preeclampsia; hypertension; diabetes; premature contractions < 37 weeks of gestation; vaginal bleeding <37 weeks of gestation; placental abnormalities; uterine abnormalities, and blood type incompatibilities (Rh, ABO, platelets, hydrops foetalis, and other kinds of blood type incompatibilities).

6.5 MIXED METHODS INTEGRATION AT INTERPRETATION LEVEL

The mixed methods integration at the interpretation level combined the qualitative and quantitative findings from Studies 1, 2, 3, and 4 and is presented in narrative weaving followed by mixed methods joint displays 1, 2, 3, and 4. The notion of confirmation, expansion, and discordance inspired the fit of this integration.

The integration of the four studies: midwives' experiences (Study 1), the level of burnout (Study 2), couples' experiences (Study 3), and labour outcomes (Study 4), identified the following themes: "Well-being in Caseload midwifery," "A positive cycle in caseload midwifery," "Drawbacks in caseload midwifery," and "A negative cycle in caseload midwifery."

Well-being in Caseload midwifery

The positive experiences of the midwives, who enjoyed their jobs and the partnership with colleagues, formed the basis of well-being. Further, they reported a lower level of burnout than did other midwives. Well-being also framed the women

and their partners' experiences of caseload midwifery and might be explained by the high success rate of being attended by a known midwife.

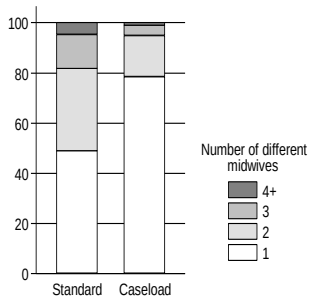
The theme was based upon the integrated interpretation of selected themes and results from the four studies (Joint display 1). In Study 1, the midwives experienced to do a meaningful, good and valuable job, and they felt high levels of engagement (Study 1). This was confirmed by a very low degree of personal, work-related and client-related burnout (Study 2) all pointing to a high degree of job-satisfaction (Study 1). These findings were expanded by the couples who experienced the midwife to acknowledge and involve the partner and that being a part of caseload midwifery created a connecting thread and facilitated the early stressful phases of labour (Study 3). In addition to that, the couples were only attended by few midwives during labour which was regarded an important part of continuity of care as it was the aim for doing caseload midwifery (Study 4). However, in standard care continuity of carer during labour and births also was high.

The midwives focused on one-to-one care (Study 1), which the couples, who felt that the midwives saw them as more than numbers, confirmed further (Study 3). The midwives underscored the meaningfulness of knowing each other (Study 1), and succeeded in doing so, as the couples experienced knowing their midwives and being known by them (Study 3).

The midwives experienced independency and autonomy and that they were in control (study1), which again was confirmed by a low level of work-related burnout (Study 2). This knowledge was expanded as the couples likewise experienced their midwife to be the navigator of the ship, who guided them through "stormy waters (Study 3).

The close partnership with a colleague seemed to contribute to the midwives' well-being, as they regarded the partnership with another midwife as a way to be prepared for all families (Study 1), particularly because the midwives helped each other when they felt challenged personally by women or partners (Study 1). Reciprocally, the couples confirmed that the midwife remembered their individual stories and wishes, which led them to experience being met at the hospital by a known friend (Study 3). In that way, the couples confirmed their well-being, which was consistent with the finding of low work-related burnout (Study 2).

Joint display 1: Well-being in caseload midwifery

<table>
<tr><th colspan="3">Well-being in Caseload midwifery</th></tr>
<tr><td>Study 1*
(1)</td><td colspan="2">The midwives experience doing a good and valuable job that makes sense and gives meaning, and feeling considerable engagement that results in a high degree of job satisfaction
One to one care was in focus, and the meaningfulness in knowing each other was acknowledged and created cohesiveness.
The midwives experience independence, autonomy, and control. The partnership with a colleague is highly appreciated</td></tr>
<tr><td>Study 2
(2)</td><td colspan="2">Level of burnout<table><tr><th>Burnout</th><th>Caseload Care Mean (SD)</th><th>Standard Care Mean (SD)</th></tr><tr><td>Personal</td><td>25.7 (12.0)</td><td>39.3 (16.1)</td></tr><tr><td>Work-related</td><td>19.2 (9.8)</td><td>37.2 (15.1)</td></tr><tr><td>Client-related</td><td>10.3 (6.0)</td><td>28.8 (16.2)</td></tr></table>All p-values < 0.05</td></tr>
<tr><td>Study 3*
(3)</td><td colspan="2">The early phases of labour are facilitated in caseload midwifery, because a connecting thread is developed. The partner feels involved, and the couple experiences that the transitions during pregnancy and labour are facilitated.
The partner and the woman experience being more than numbers and that they and the midwives know each other
The couples regard the midwife as the navigator of the ship
The couples experience being included
The couples experience the midwife as remembering their story and their wishes for childbirth</td></tr>
<tr><td>Study 4
(Paper 4)</td><td>Mean number of midwives during labour
 
</td><td>In caseload midwifery, 72% had only one midwife during childbirth and 95 % saw only two midwives. In standard care the numbers were 49% and 82% respectively, which is illustrated in the figure.</td></tr>
</table>

* The exact words from themes and essences in Studies 1 and 3 are in italics.

A positive cycle in caseload midwifery

The close relationship between caseload midwives, colleagues, women, and their partners seemed to reinforce each other, and created an atmosphere of respect and mutual empathy. This mutual empathy led to kind and thoughtful acts that again strengthened the relationship and developed a positive cycle.

This theme was based upon the integrated interpretation of selected themes and the results from the four studies (Joint display 2). In Study 1, the midwives focused on performing family-centred care, and felt able to take the time the couples needed. Moreover, they were able to create a protective space around the couples in the labour ward to demonstrate that this family was their focus (Study 1). Reciprocally, the couples felt involved and included by the midwife during childbirth (Study 3). During labour, the midwives preferred to stay in the delivery suite, or made clear appointments if they had to leave the room (Study 3). This was consistent with the goal of providing one-to-one care (Study 1), and made the families feel that they were treated individually and guided through childbirth (Study 3). Study 4 also confirmed this finding of focusing on the family, as it showed that the midwives conducted 70% of all procedures in childbirth (Study 4), which fulfilled most of the families' expectations (Study 3)

Both the woman and her partner perceived that the midwife regarded them as equal human beings (Study 3). Similarly, the midwives believed that the couples perceived them as "more than just a midwife" (Study 1). The couples remembered the midwives' names (Study 3) and the midwives made an effort to remember theirs by keeping updated lists of their caseload (Study 1). The very low degree of client-related burnout among midwives confirmed this reciprocal consideration and recognition (Study 2).

The couples indicated that midwives' small talk about subjects relevant to their personal lives, as well as their concerns about the very limited parking conditions (Study 3), were very considerate acts. Moreover, the midwives appreciated the couples' consideration of their needs (Study 1) which might have contributed to less client-related burnout (Study 2). Again, a positive cycle was created.

The couples regarded the phone as their lifeline, and the midwives always made an effort to sound welcoming (Study 1), which the couples confirmed, in that they felt welcomed when they contacted the midwife. They appreciated that the midwife indicated clearly that the onset of labour was a welcoming event (Study 3).

Joint display 2: A positive cycle in caseload midwifery

<table>
<tr><th colspan="2">A positive cycle in caseload midwifery</th></tr>
<tr><td>Study 1* (1)</td><td>

Family-centred care indicates that decisions are made with the family and the focus is on one-to-one care
The phone is a practical means to create relationships, and is regarded as a lifeline in this model of care. The midwife sounds welcoming on the phone
The list is always updated so the midwife can remember the couples
The midwife feels able to create a protective space around the families and to take the time she needs
The midwife feels regarded as a whole person with a body, and recognized as more than a midwife
The partnership with a colleague allows the midwife to embrace challenging families and create good relationships

</td></tr>
<tr><td>Study 2 (2)</td><td>Level of burnout
<table>
<tr><th>Burnout</th><th>Caseload Care
Mean (SD)</th><th>Standard Care
Mean (SD)</th></tr>
<tr><td>Personal</td><td>25.7 (12.0)</td><td>39.3 (16.1)</td></tr>
<tr><td>Work-related</td><td>19.2 (9.8)</td><td>37.2 (15.1)</td></tr>
<tr><td>Client-related</td><td>10.3 (6.0)</td><td>28.8 (16.2)</td></tr>
</table>
All p-values < 0.05
</td></tr>
<tr><td>Study 3* (3)</td><td>

The partner feels involved and both the partner and the woman experience that they are more than numbers. This is elaborated further by a relationship characterised by equality and inclusiveness, in which couples feel that they are treated individually
The couple experiences a welcoming first contact, and at the hospital, they experience being met by a known friend who was even able to guide them about parking
The midwife is able to make small talk about the partner's job
The couple feels that they are guided through labour
The midwife makes and keeps clear appointments during labour
The couple remembers the midwife's name and takes into account the time of day when they call her
The midwife creates a connecting thread even when she is not present

</td></tr>
<tr><td>Study 4 (Paper 4)</td><td>Caseload midwives perform 70% of all procedures during childbirth</td></tr>
</table>

* The exact words from themes and essences in Studies 1 and 3 are in italics.

Drawbacks in caseload midwifery

Both the midwives and couples in the studies gave little attention to the negative aspects of caseload midwifery. However, when combined, these drawbacks seemed to explain and confirm each other, although the findings of burnout were inconsistent, which underscored the complexity of caseload midwifery.

This theme was based upon the integrated interpretation of selected themes and results from the four studies (Joint display 3). In Study 1, the midwives felt pressured by their obligation to be there for all of their women. The couples underscored the weight of the obligation, as they clearly expected their midwife to be there for them and to be "the navigator on the ship" (Study 3). The couples recognized their midwives' responsibility during birth, because they emphasized that they had the opportunity during a subsequent meeting to ask their midwives to answer for their acts and decisions during labour (Study 3).

Before labour, the couples worried that their own midwives might not attend them, and some expressed disappointment if that expectation was not met (Study 3). A known midwife attended 70% of the couples, and thus, did not attend 30% (Study 4). Therefore, the midwives' fear of disappointing the women was realized, and some couples inevitably felt let down (Study 3). This knowledge stressed the midwives, because they felt obliged to be there and had a reputation to uphold (Study 1). The responsibilities of caseload midwives and the undefined working hours also put pressure on their families, as many of the midwives' partners experienced to be "on call" for their own families when the midwives were on call for the couples (Study 1). However, these findings that midwives were under pressure contrasted with the low level of burnout reported (Study 2).

Joint display 3: Drawbacks in caseload midwifery

<table>
<tr><th colspan="2">Drawbacks in caseload midwifery</th></tr>
<tr><td>Study 1*
(1)</td><td>

The midwives are pressed by the obligation to be there for all
It is considered important that the midwives had a reputation to uphold
The undefined working hours are also mentioned as a disadvantage
There are disadvantages with respect to the midwives' personal lives
The midwives' partners experience being on call for their families
The midwives working in caseloads find that the benefits outweigh the disadvantages

</td></tr>
<tr><td>Study 2
(2)</td><td>Level of burnout
<table>
<tr><th>Burnout</th><th>Caseload Care
Mean (SD)</th><th>Standard Care
Mean (SD)</th></tr>
<tr><td>Personal</td><td>25.7 (12.0)</td><td>39.3 (16.1)</td></tr>
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</table>
All p-values < 0.05</td></tr>
<tr><td>Study 3*
(3)</td><td>

The couples want their midwife to be "the navigator on the ship" and to be there for them
Midwives and couples know each other and the couples know that they will meet the midwife again, and she will have to take responsibility for her actions
The couples experience disappointment if expectations are not met
Couples feel let down by the midwife if their expectation of having a known midwife during birth is not fulfilled

</td></tr>
<tr><td>Study 4
(Paper 4)</td><td>Over a three year period, the caseload midwives performed, on average, 70% of all procedures during childbirth

There were no differences in early discharge rates</td></tr>
</table>

* The exact words from themes and essences in Studies 1 and 3 are in italics.

A negative cycle in caseload midwifery

The discovery of a negative cycle in caseload midwifery was unexpected, but was attributable to the fact that midwives' heavy obligations seemed to constrain the time spent in each labour and consequently, led the midwives to adopt a more active approach. Moreover, the shared decision approach and the couples' preferences for a short duration of labour might contribute to this approach.

This theme emerged from the integrated interpretation of selected themes and results from the four studies (Joint display 4). The comparison within this setting of the use of augmentation revealed that, although the OR was small, it indicated that caseload midwives adopted a more active approach primary to multiparous birth than did those in standard care (Study 4). The higher rate of emergency Caesarean sections seemed partly explained by the distance to hospital and probably not the more active approach (Study 4)

Births that took less than 10 hours were more common in caseload midwifery (Study 4). This was consistent with the couples' preferences for short births (Study 3), but inconsistent with the midwives' experiences of taking the time they needed and not rushing (Study 1). However, the midwives did worry about long and undefined working hours (Study 1), and did have a high on-call workload (Study 1). However, the level of burnout remained low (Study 2), which is inconsistent with the heavy workload.

The finding that births were shorter seemed to be attributable to more augmentation and maybe more emergency Caesarean sections (Study 4). Further, the more active approach might have led to lower neonatal Apgar scores (Study 4). This finding was inconsistent with their obligation to do a good and valuable job (Study 1), and to respond to the couples' concern for the health of their infants (Study 3). Yet, this finding has not been previously revealed.

The finding that multiparous received more interventions than did primiparous (Study 4) might be explained in part by the fact that they had an expectation of a quick birth (Study 3). The close relationship with the midwife, who had a stronger allegiance to them than to the institution (Study 3), might also have influenced decision-making (Study 1). Further, the couples were disappointed if their expectations were not met (Study 3).

The long, undefined working hours and the obligation to be there for everyone (Study 1), combined with the couples' expectations and their pressure on the midwives (Study 3), might lead to a negative cycle in which the desire to do good unexpectedly led to more interventions followed by lower Apgar scores (Study 4).

Joint display 4: A negative cycle in caseload midwifery

A negative cycle in caseload midwifery

Study 1 (1)

- Midwives are *pressed by the obligation* to be there for everyone as they *have a reputation to care for*
- The midwives want to *make decisions with the family*, as their work is *family-centred* and *the partner also is involved*
- The midwives experience performing *a good and valuable job*
- Midwives want to *take the time needed* and be there for their women
- Midwives experience *independence and autonomy*
- Midwives have to *cope with the undefined working hours*
- There are 60 women per full time caseload midwife

Study 2 (2)

Level of burnout

Burnout	Caseload Care Mean (SD)	Standard Care Mean (SD)
Personal	25.7 (12.0)	39.3 (16.1)
Work-related	19.2 (9.8)	37.2 (15.1)
Client-related	10.3 (6.0)	28.8 (16.2)

All *p*-values < 0.05

Study 3 (3)

- The couples want to *deal with problems as they show up*, and *accept Caesarean sections* if necessary
- The couples, who have a *relationship characterised by equality and inclusiveness, feel included* and *equal to the midwife*
- They regard the midwife as *a professional friend*
- The couples feel that *the midwife has a stronger allegiance to them than to the institution*
- The couples *want labour to be short* and they feel *disappointed if expectations are not met*

Study 4 (Paper 4)

Combined selected outcomes from Table 3 and 4 (Paper 4)

	All participants		**Primiparous**		**Multiparous**	
	Adj. OR*	**95% CI**	**Adj. OR***	**95% CI**	**Adj. OR***	**95% CI**
Augmentation	1.20	1.06; 1.35	1.05	0.90;1.21	1.49	1.24;1.80
Emergency CS	1.17	1.03;1.34	1.11	0.93;1.32	1.31	1.04;1.56
Apgar=<7 (5 min.)	1.57	1.11; 2.23	1.43	0.89;2.29	1.69	1.01;2.83
Umb. art. pH<7.05	1.21	0.84; 1.75	1.02	0.62;1.69	1.41	0.81;2.46
Transfer to NICU	1.20	0.97; 1.47	1.33	1.01;1.74	0.98	0.74;1.31
Labour<=10 hours	1.26	1.13; 1.42	1.29	1.12;1.49	1.22	1.02; 1.46

Compared to other countries, the quality of care was high in both models. No differences existed with respect to the use of elective Caesarean sections, induction, amniotomy, instrumental delivery, use of epidurals for analgesia, preterm births, and third degree lacerations and ambulant birth

* The exact words from themes and essences in Studies 1 and 3 are in italics.

Chapter 7. DISCUSSION

This section discusses the findings from the mixed methods interpretations. This discussion is followed by methodological considerations, including discussion of the legitimacy of the mixed methods research process. Finally, it includes a discussion of the methods for the four underlying studies and the ability to generalise their results

7.1 DISCUSSION OF FINDINGS

The aim of this thesis was to expand the understanding of the complexity of caseload midwifery by integrating findings from both qualitative and quantitative studies answering the mixed methods question: What is the experience and outcome of caseload midwifery in a Danish context?

The integration at the interpretation level resulted in four themes: "Well-being in caseload midwifery," "A positive cycle in caseload midwifery," "Drawbacks in caseload midwifery," and "A negative cycle in caseload midwifery."

The first and second themes are discussed together in *Well-being and the positive cycle in caseload midwifery* because the findings are interrelated, as "the positive cycle" explains the way in which "well-being" is created and the converse. Similarly, theme three and four are discussed together in *Drawbacks in caseload Midwifery leading to a negative cycle*, because "drawbacks" produce insights about the reasons why caseload midwifery might also lead to a "negative cycle." Finally, there is a *combined discussion* designed to integrate all findings to reach a conclusion.

Well-being and the positive circle in caseload midwifery

Well-being among midwives was confirmed by a low level of burnout. Supplementary to that, 95% of the couples were attended by only two midwives during labour showing continuity of care which led to well-being among the couples. Well-being was found to lead to multiple considerate acts which then again led to well-being in a cyclic process – a positive circle.

Most studies have investigated either midwives' (6, 41, 102-104) or women's (3, 10, 57, 59, 60, 105) perspectives on caseload midwifery, and have found that midwives most often thrive in caseload midwifery (6), and that women prefer

caseload midwifery (59). The strengths of this mixed methods approach are that the studies that measured midwives' or couples' perspectives were carried out in the same setting at the same time. The subsequent integration of the relevant aspects of all four studies confirmed this mutual well-being, and led to a deeper understanding of the way in which multiple considerate acts led to a positive cycle that reinforced well-being further.

"Well-being" was the concept that best described the positive atmosphere in caseload midwifery. WHO uses well-being in its definition of health, and describes it as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (106). In this dissertation, the notion of well-being indicated mental and social well-being because of the experiences of mutual recognition, being seen individually, and the rewarding relationships between midwives and couples and between the midwives.

Moreover, midwives' and couples' well-being appeared to be grounded in meaningfulness and having control, which is consistent with Antonovsky's salutogenetic theory, which focuses on what makes people healthy (107, 108). In the midwifery-related literature, Antonovsky's concept of a sense of coherence (SOC) that leads to meaningfulness has been used as a tool to measure well-being (109, 110). SOC is created throughout life and consists of comprehensibility, manageability, and meaningfulness; the last is regarded as most important (108). Comprehensibility refers to the belief that events occur predictably (108). In caseload midwifery, the multiple considerate acts on the part of both midwives and couples made the situation predictable. Manageability is defined as being able to manage a situation by having the necessary skills and support (108). The couples felt that the midwives guided and supported them through labour because of their multiple considerate acts and their professional skills. The midwives felt able to manage the situation and each midwife perceived that she was seen as more than just a midwife. Comprehensibility and manageability lead to meaningfulness (108). Accordingly, meaningfulness in caseload midwifery is based upon the high level of comprehensibility and manageability, and might explain the findings of well-being and the development of a positive cycle overall.

In general, well-being is a complex concept, as some researchers have defined it as a psychosocial construct that can be examined through surveys in which findings are correlated and analysed with multiple regression (111). As an example, the Copenhagen Psychosocial Questionnaire, revised in 2010, is a comprehensive questionnaire that includes questions on well-being (112). Well-being is defined as the absence of sleep problems, burnout, various types of stress, and depressive symptoms. This definition of well-being explains what it *is not*. This contrasts with

these findings, in which well-being was defined according to what it *is*, as exemplified by numerous findings, and explained further with respect to the multiple considerate acts that led to the development of a positive cycle. Questions from the CBI used in Study 2 are incorporated in the Copenhagen Psychosocial Questionnaire in the section, "Health and well-being" (112), which underscores that, from the perspective of these researchers, a low level of burnout is only one feature of well-being.

Explaining the sense of well-being that caseload midwifery is able to create and the positive cycle it also promotes, leads us a step further in increasing our understanding of the complexity of caseload midwifery. Moreover, some of these findings need consideration with respect to the ability to transfer them to standard care to improve on other aspects of midwifery, as well as their transferability to other healthcare sectors.

Drawbacks in caseload midwifery leading to a negative circle

In this dissertation, the labour outcomes overall were very good and were better than or consistent with the outcomes of caseload midwifery models in other countries (Paper 4). However, in the comparison between caseload midwifery and standard care in this setting, we found that caseload midwives had a more active approach to labour especially for multiparous, and this might unexpectedly have affected the neonatal outcomes negatively. Internationally, labour outcomes seem to improve in caseload midwifery (11, 13-16). Therefore, we need to reflect further on the drawbacks, and the way in which they might lead to a negative cycle that result in interventions that compromise neonatal outcomes. The strength of this dissertation is that it allowed identification and interpretation of drawbacks in combination with a quantitative investigation of the labour outcomes.

Overall, the benefits overshadowed the drawbacks (1), which other studies have confirmed (6, 12, 40-42). One study reported drawbacks and found that midwives struggled to manage the work-life balance because of their undefined working hours (45). Newton found that negative clinical outcomes in caseload midwifery led the midwife to believe that she had missed something (113). We need to consider these drawbacks when evidence indicates that midwives had a more active approach to multiparous' labours.

The close relationships between midwives and couples were found to lead to a strong obligation on the part of the midwives to be there for all their women, a finding that is supported by others (8, 45, 46). One study found that this close relationship made the midwife afraid of having something go wrong, and therefore,

she was more alert, but also took more risks (44). In contrast, the development of a close relationship has most often been regarded as positive (4, 11, 15, 30, 57, 114) because it facilitates the release of the hormone oxytocin, which promotes more spontaneous births (115), as confirmed in many studies (11, 13-15). However, this is in contrast to the findings here, in which the close relationship seems to compromise labour outcomes.

One review concluded that the birth setting influences midwifery practice (116). This dissertation supported these findings, as Study 4 showed that many outcomes were similar in caseload midwifery and standard care, and the differences that did exist were small. However, the review also concluded that the woman's needs rather than the hospital protocol influenced midwives' decision-making processes (116), which is consistent with the shared decision approach found in this dissertation (1), but might be in contrast to a non-interventionist approach found in other studies (15, 30). The women/couples in our setting did not choose actively to join a caseload; rather, they happened to live in a town in which caseload midwifery was the option available (3). In international observational studies, women often have chosen caseload midwifery because they prefer a spontaneous, normal birth (14, 117), and/or continuity of care (16, 70). The couples that participated in Study 3 wanted to deal with problems as they arose, and preferred rapid births (3). Taking into account the fact that neither the midwives nor the couples had a specific non-interventionist approach to labour, the midwives might experience strong pressure to follow the couples' wishes. Thus, to avoid a slow labour and ensure that she is able to be there throughout labour, the midwife might feel tempted to accelerate births. That multiparous are most exposed might be caused by the expectation of a short length of a multiparous' labour from both the perspective of the midwives and the couples.

In this setting, the strong obligation and shared decision approach, combined with the couple's appreciation of a rapid birth might lead to a negative cycle in which unnecessary interventions have an adverse influence on neonatal outcomes. Many studies have found that the inappropriate use of oxytocin can influence neonatal outcomes adversely (118-123), and might be a causal explanation for the compromised outcomes in this study.

Recently, an observational study in New Zealand reported adverse neonatal effects of caseload midwifery (124). The results in this study have been discussed thoroughly and the limitations have been highlighted (125). The model of care in this setting is not comparable to midwifery practice in New Zealand, and the inclusion criteria differed; therefore, the ability to generalise the results is limited.

The drawbacks and negative cycle contrasted with the finding of low midwife burnout. However, in addition to the limited sample size in the study, one can argue whether workplace burnout is the right concept needed to measure the negative influence of excessively close relationships. In other countries, some studies have focused on compassion fatigue, which is exhaustion caused by empathy (126). In this area, we need to consider what we want to measure before initiating further research in a larger context.

Combined discussion

The discussion of the mixed methods findings demonstrated complexity of caseload midwifery. Although caseload midwifery creates well-being and a positive cycle in which meaningfulness and a sense of coherence (SOC) are central, drawbacks might lead simultaneously to a negative cycle in accord to some labour outcomes.

Green explained that women's psychological and emotional well-being after childbirth were associated with having sufficient information that allowed a sense of choice and personal control over the childbearing process (127); Viisainen added that even when interventions were used, women still described their births as "normal" if they were offered choice and control (128). These findings confirmed that a more active approach might not hinder well-being and a sense of coherence if the women are offered choices. In addition, Ferguson did not find a relationship between SOC and preferred birth-type, as women with high SOC scores were no more likely than were those with low scores to plan a normal birth or to wish to avoid epidural analgesia during labour (110). Therefore, the couples' preferences for rapid births might neither be associated with low levels of SOC, nor will their experiences of well-being be threatened by interventions. However, because of the adverse neonatal outcomes, we still need to address the midwives' obligations and the couples' implied dependence to be able to prevent a negative cycle from developing.

A focus group study developed a "Work-life Balance" tool for midwives to use to monitor their well-being regularly (45). The midwives in the focus groups reflected on and re-evaluated their assumptions about their relationship with the women. They found that care should not promote a dependent relationship that leads to guilt and an impaired work-life balance (45). Further, in one study, a woman stated that the midwife was too involved with her, and the researchers stressed that the midwife needs to set appropriate boundaries in managing her role (62). More research is required in this area to determine ways to handle the close relationship and to balance professionalism and friendship.

The integrated findings implied that both the couples and the midwives play roles in taking a more active approach. However, it is also important to consider the setting and the organisational structure of caseload midwifery. The workload in the M@ngo study was 40 all-risk women per year per midwife (13), and in Cosmos, 45 low risk women per year (15), with the midwives performing postnatal care for approximately six weeks (15). In this study, each full-time caseload midwife cared for 60 women per year (1), but made only one postnatal visit. When a more active approach is found, we must also consider the difference in the nature of the workload - engaging in postnatal care or being on call for more women. In this setting, the midwives might be subjected to greater pressure to hurry to be ready for the next call.

The midwives most often worked in pairs and were allowed to rest after 12-16 consecutive hours at work if a hospital midwife was able to take over. In the M@ngo study the midwives worked in groups of four with one primary midwife, and did not work in excess of 12 consecutive hours in any 24-hour period (13). In the Cosmos study, the midwives were allowed to leave after 12 hours of work in a 24-hour period (15), while here, as well as in the M@ngo study, a known back-up midwife from the caseload took over. We need to consider that, midwives might find it more difficult to leave when they know that a midwife unknown to the woman will replace them and therefore they do not ask to be replaced. Long calls lead to fatigue, which is known to have a negative effect on decision-making (129, 130). In conclusion, we must also consider the influence of the organisation of this model of care to understand the more active approach and the full complexity of caseload midwifery.

7.2 MIXED METHODS DISCUSSION

The issue of the validity of mixed methods designs will be discussed in the framework of Onwuegbuzie and Johnson's work and their suggestion of the way in which to validate mixed methods research (131). Their framework was chosen because they translated validity, which is used most often in quantitative research, into *legitimation*. *Legitimation* is a bilingual nomenclature that embraces the different concepts of validity that are combined in mixed methods research.

Legitimation involves a broad validation of the concepts of mixed methods subdivided into different types. *Sample integration-, inside-outside-, weakness minimisation-, paradigmatic mixing-, and commensurability-, multiple validities-, and political-legitimation* were relevant to this study (131).

Sample integration occurred in the exploratory sequential phase, where a finding in Study 1 led to using a survey on burnout in Study 2. The result was that the quantitative results confirmed the qualitative results.

Inside-outside legitimation is the extent to which the researcher presents and uses the insider's and outsider's views accurately (131). In the qualitative studies, the researcher was to some extent an insider. Considering the researcher's preunderstandings in the qualitative studies was one way to enlighten the insider's perspective and be aware of blind spots. Further, participant review (131) or member-checking (132) are strategies to challenge the insider's perspective. This was conducted among midwives in both maternity units. In quantitative studies, one can obtain the outsider's perspective by presenting findings through a peer-review process (131). In this dissertation, the team of supervisors, as well as the journals' peer reviewers, incorporated the outsider's view by questioning the findings. Further, quantitative research also must address the insider perspective to avoid researcher bias (86, 131). The researcher discussed thoroughly the many choices of statistical methods, data analysis, and the conclusions with supervisors skilled in statistical analysis. However, supervisors also might be subject to blind spots. Thus, by sharing findings further with others, we can evaluate and discuss them contextually.

Weakness minimisation legitimation questions the way in which a mixed method study succeeds in combining the complementary strengths and non-overlapping weaknesses of the different studies (131). Studies 1 and 3 acquired in-depth knowledge of caseload midwifery, and Studies 2 and 4 permitted measurement of the effects of caseload midwifery. Because of these differences, the studies had different complementary strengths, and therefore, their integration minimised the limitations of each. This expanded the knowledge of caseload midwifery and highlighted its complexity in a way that each study alone could not have done.

Paradigmatic mixing legitimation is concerned with the way in which the researcher combines the underlying paradigms in the studies and blends them successfully (131). In this dissertation, the studies focused on the same phenomenon, and therefore, it was reasonable to combine the findings despite their different underlying paradigms. The researcher acknowledges that there is a threat of compromising in depth knowledge in each study, but the aim of this dissertation was to understand complexity; consequently, the research questions were rooted in different paradigms.

Commensurability legitimation refers to whether the researcher is able to switch from a qualitative to a quantitative lens (131). In each of the studies, the researcher was aware of the differences in the methods, theories, and worldviews, and

attempted to perform each study within the values and methods recognised in each discipline. Further, each study was validated and published within its own field. In addition, the different competencies of the supervisors' team enabled continuous questioning of the researcher's lens.

Multiple validities legitimation refers to the extent to which relevant research strategies are used and the research can be considered of high quality within its own field (78, 80, 131). The following paragraph 7.3 provides a specific elaboration of the strengths and limitations of the four studies. Thus, only the validity of integrating findings is mentioned here. Integration in mixed methods study is emphasised highly (73), but the validity of integration is discussed (73, 77, 81, 131, 133). This discussion is rooted in the paradigmatic legitimation debate aforementioned, that asks whether one can integrate qualitative themes with quantitative results. In this dissertation, integrating findings was relevant, as the findings explained each other and expanded the knowledge. For example, the low level of burnout in Study 2 and the couples' positive experiences in Study 3 confirmed the positive findings in Study 1. Yet, the results from Study 4 indicated that certain drawbacks existed, which again led to deep reflections, because the findings challenged the researcher's preconceptions; in the end, it provided a deeper understanding of caseload midwifery.

However, although it was possible to integrate the findings, we do not know whether we discovered the truth; only further discussion with the midwives and future research will tell.

Political legitimation refers to power and value tensions that come to the fore in the combination of quantitative and qualitative approaches (131). More researchers have reported a growing understanding of the value of all types of well executed research (134-137). This understanding is the keystone of mixed methods research. This dissertation demonstrated the use of mixed methods by elaborating the way in which a mixed methods approach enhanced our understanding of the complexity of caseload midwifery.

7.3 STRENGTH AND LIMITATIONS OF THE STUDIES

The discussion of strengths and limitations that follows addresses first the qualitative and then the quantitative studies two by two.

Qualitative studies: Studies 1 and 3

The trustworthiness of qualitative research depends on *credibility*, *transferability*, *dependability, and confirmability* (138), to which the following discussion of the quality of the results will refer.

The fact that the researcher spent time with the informants during the observation periods enhanced the *credibility* of the findings. This allowed the researcher to experience caseload midwifery in action and use field notes as the starting point for the interviews. This stimulated a genuine dialogue about what had actually happened. Method-triangulation refers to the combination of observations and interviews (139). During the observations, the researcher wrote self-reflections and focused on anything unforeseen that challenged her preconceptions. The researcher was convinced *a priori* that women preferred caseload midwifery, but that the midwives' working conditions were demanding. In contrast, the midwives reported high job-satisfaction, which called those preconceptions into question

In participant observation, the researcher is a part of, and affects the environment (87, 96), which also might threaten *credibility*. In Studies 1 and 3, the midwives might have tried harder to perform well. However, because women/couples visit the midwives repeatedly during pregnancy, it is likely that they behaved normally during consultations. Further, in the labour ward, a detached attitude might be difficult to maintain during many hours of observations. Caseload midwives have a considerable obligation to do their best to uphold their reputations, and therefore, the question is in what way, and to what degree, the researcher's presence influenced their work.

The aim of Study 1 was to advance the knowledge of the working and living conditions of caseload midwives, and the way in which this model of care is embedded in a standard maternity unit. Therefore, the researcher observed and interviewed such midwives, which strengthened *credibility*. Similarly, the participants in Study 3 were relevant to the aim, which was to explore the way in which women and their partners experienced caseload midwifery.

The complementary and high competencies among the supervisor team who supported and questioned the research phases also enhanced the studies' *credibility*.

Describing the models of caseload midwifery and standard care thoroughly enhanced *transferability*; this allows other researchers to consider whether the findings can be generalized to their context. The researcher described the midwives and couples included, as well as the procedures used to select participants. According to Study 3, it is necessary to discuss the inclusion of participants, because the midwives included and therefore, selected the couples. How many

couples they asked and how many declined is unknown. Consequently, the couples included might be more positive than others would have been. Yet, the couples' experiences of continuity of care were consistent with findings from numerous international studies.

Further, the researcher described and reflected upon her preconceptions, as well as experiences and connections with the midwives, which strengthened *transferability* as well.

The research process was consistent over time, which strengthens its *dependability*. Initially, the researcher held meetings to inform the participants about each study. Thereafter, information letters were distributed and when individuals agreed to participate, they signed the declaration of consent (Appendix G). The observations were performed in antenatal clinics (Study 1) or labour wards (Study 3), and was followed by interviews using an overall interview guide supplemented by questions inspired by the field notes. Dyadic interviewing (Study 3) was a new method for gathering information, but the couples inspired each other and drew forth responses from the other. The depth of the interviews did not seem threatened as intimate issues also were elaborated.

The *dependability* of the findings of Studies 1 and Study 3 was ensured further, as the research methods were consistent with the research questions and the analyses were conducted systematically to illustrate the way in which themes were developed and the essences were identified.

After observations and interviews, a form of *confirmability* occurred. In depth descriptions of experiences were gathered, and in the beginning, new insights were often gained that challenged the researcher preconceptions. After including 9 caseload midwives, saturation (90, 132) with respect to the aim of the research seemed to be met. However, 3 more midwives had already volunteered and therefore, were included, which in the end, confirmed the findings because the observations of, and interviews with the last three midwives did not alter the conclusions. However the long lasting sustainability of this work-form is not clarified in this study, since half of the caseloading models only were established in 2012 or 2013.

This specific caseload model differs from others, but nonetheless, it still leads to continuity of care, the phenomenon under study. Accordingly, the trustworthiness of the qualitative studies can be elaborated further by referring to Creswell's standards for performing phenomenological research (76). These standards were met, as the researcher reached an understanding of the basic philosophical tenets of phenomenology and the "phenomenon" was clear. Moreover, the researcher followed the analysis recommended by Van Manen, and the overall essences

referred to contexts and included descriptions of the experiences. The researcher also was reflective throughout the research. Referring to Creswell's recommendations (76), the transcriptions in the studies were accurate and the analyses were described. The researcher had to translate Danish quotes into English for publications, which might have introduced biases, although the supervisors discussed the translations.

In conclusion, the qualitative studies appeared to be trustworthy overall

Quantitative studies: Studies 2 and 4

The following discussion addresses Study 4 and 2 separately.

In quantitative research the quality of a study depends on the *reliability* and the *validity* of a study (140). *Reliability* refers to the stability or consistency of information (140). *Validity* refers to whether the study produces sound conclusions (140, 141).

Both maternity units provided the caseloading midwives with the same technical equipment, obstetric service and guidelines, and the model for caseloading care and standard care were equal which strengthen the *reliability*. Several supplementary analyses were performed and except from small differences the supplementary analysis showed similar results. Sensitivity analyses excluded either women who needed interpreter or home-birthing women which did not change the results. Register data is a valuable tool for research (142, 143) but is also susceptible to errors (144) but any misclassification of data is regarded to be equal in the two groups and therefore the information is regarded consistent and therefore the *reliability* seemed to be high.

Validity is often divided into *internal* and *external validity*. The internal validity of a study indicates the ability to avoid *random*, as well as *systematic* errors (145). Systematic errors can be divided into *selection-bias*, *information-bias*, and *confounders (145).* The external validity of a study is "the capacity to yield sound generalisations going outside the study population" (140).

In the register-based cohort study (Study 4), the large number of participants prevented *random errors* (141). Random error is variability in the data that cannot be explained readily and often is found in studies without random selection, as in cohort studies, for example (145). Random errors can result from variation both between and within individuals. The researcher tried to avoid random errors by including as long a time period possible in the cohort study taking into account that

each caseloading model had been working for at least a year. Point estimates were conducted, and confidence intervals and/or *p*-values were provided to indicate the precision of these estimates.

To avoid *information bias* (141), the researcher checked the ICD-10 codes in the dataset to ensure their correct interpretation according to the coding used in each hospital. The researcher used the woman's primary midwife to determine her affinity for caseload midwifery. The midwife confirmed this information during childbirth, and therefore, it was most likely correct, but some *information bias* might have occurred.

Apgar scores, umbilical arterial pH and transfer to NICU pointed in the same direction but the difference in low Apgar was statistically significant whereas arterial pH under 7.05 and transfer to NICU did not reach the level of significance. Scoring of Apgar and arterial pH are both known to be good predictors for neonatal well-being (146-148) and therefore the differences are not regarded *as information-bias*. This difference between Apgar and arterial umbilical pH also was found in a study where 60% of infants with Apgar below 7 in the first minute had a normal umbilical arterial pH (149) .

With respect to *selection bias*, it was important that the women did not self-select into caseload care. In the supplementary analysis, the researcher addressed *selection bias* by comparing the outcomes in the caseload group with that of other women who also attended antenatal clinics peripheral to the maternity units, but not receiving caseload midwifery, and there were no adverse neonatal outcomes in that group but the emergency Caesarean aOR tended to be similar to this rate in the caseload group.

The midwives self-selected into caseload midwifery, and therefore, *selection bias* might have existed in this context. However, as mentioned previously, the philosophy of care in the maternity units likely influenced the midwives, and consistent with that, the researcher found that the midwives did not have a specific non-interventionist approach to childbirth. In the three-year period, 28 different midwives covered the 18 jobs in caseload midwifery. Therefore, more midwives influenced the results, and the "flow of midwives" has to be considered in interpreting the results.

To further investigate whether *selection bias* existed, a number of sensitivity analyses were performed which strengthens the validity of the results.

With respect to *confounding*, the researcher controlled for the confounders chosen *a priori* in the regression analyses. All possible confounders were entered in the analysis simultaneously. Stepwise regression was not used, as the goal was to

understand the underlying system rather than a small number of predictors. Further, if predictor variables were correlated, the use of stepwise regression might lead to misleading results (119). Data collection also was both retrospective and prospective, which allowed new variables to be added and social differences to be controlled. However, the higher odds for emergency Caesarean section in caseload midwifery and a similar trend in women with approximately same distance to hospital underscored that in general, the potential confounding variables were controlled, but residual confounds might still exist.

We found a higher rate of augmentation and lower Apgar scores. The association between augmentation and adverse neonatal outcome is supported by international research showing that inappropriate use of oxytocin can lead to adverse outcome (120, 121, 123). However, the M@ngo study (13) had equal high use of augmentation in caseload midwifery but no adverse neonatal outcome, which we cannot explain. Exhausted health professionals contribute significantly to impairments in physical, cognitive, and emotional functioning interventions (129) and therefore we would have liked to be able to control for long working hours.

External validity is a subjective estimate/judgement about which results can be generalised to other settings or populations (150). The *reliability* and *internal validity* was high, but the ability to generalise the results might be limited, as both models of care perform better than or equal to caseload midwifery in other countries, indicating differences in care between countries for which the caseload models cannot account. Further, to generalise the results to other settings requires thorough consideration of the model of caseload midwifery and the model of standard care.

With respect to *reliability* the strength of the burnout study was its high response rate and the use of a validated questionnaire. The CBI was created and pilot tested in a Danish context (51). Moreover, the finding of less burnout in caseload midwifery was consistent with international findings (6).

The internal validity of a study indicates the ability to avoid *random*, as well as *systematic* errors (144). The burnout study (Study 2) was subjected to *random errors* because of the limited number of midwives. The small number of participants allowed the researcher only to use the average score for each of the three domains in the analysis; it would have been interesting to look more closely at some of the specific questions.

The midwives seemed to understand the questions when they filled out the questionnaire. This might have prevented *information bias*.

In general, burnout might be related to time spent at work, and some of the midwives had only been working in caseload midwifery for a limited number of years, as most of the models have only existed since 2013; this would have contributed to potential *selection bias*.

The internal validity of the burnout investigation was high because of the validated questionnaire and the high response rate, but the limited number of participants has threatened the *external validity*. Moreover, at this stage it is important to consider whether the questions used to measure burnout reveal what we want to know. The preunderstanding in the CBI scheme is that people have a "work day" and not on-call work. Compared to the short, self-test work-life balance scheme developed in a focus-group study of caseload midwives (45), questions about being on call should be included in investigations of caseload midwifery. In addition, questions about compassion fatigue (125) or psychosocial wellbeing (111) might be relevant to measure well-being in caseload midwifery.

Chapter 8. CONCLUSION

The aim of this dissertation was to answer the overall research question: What are the experiences and outcomes of caseload midwifery in a Danish context? The answer was sought through: qualitative exploration of the midwives' experiences, an investigation of burnout among midwives, qualitative exploration of the couples' experiences, and epidemiological comparisons of labour outcomes in caseload midwifery and standard care. Finally an integrated mixed methods interpretation combined these findings and brought us one step further in understanding the complexity of caseload midwifery.

In conclusion:

- In caseload midwifery the midwives experienced to have a meaningful job which led to great job-satisfaction. The midwives received appreciation, and social recognition but the embedded and strong obligation might challenge the balance between the meaningful job and their personal lives. The midwives who worked in caseloads found benefits to outweigh disadvantages.

- Caseload midwifery was associated with lower burnout scores, which is in accordance with the results from other studies. According to the high response rate the results were valid for this maternity unit but this study was too small to be generalised.

- Attending caseload midwifery meant that the couples were individually recognized and cared for. The partner felt included and acknowledged to work in a team with the midwife. The relationship to the midwife was regarded as a professional friendship characterized by equality and inclusiveness. Multiple considerate acts seemed to be the constituents of caseload midwifery.

- For most labour outcomes, there was no difference across the two models of care. Yet, we observed slightly more augmentations and adverse neonatal outcomes in caseload midwifery. These findings should be interpreted in the context of the overall low intervention and complication rates in this Danish setting, the observational design of the study, and the research that supports the benefits of caseload midwifery.

Integrated findings:

Both midwives and couples experienced significant well-being. The midwives experienced high job satisfaction and low levels of burnout compared to standard care. The women appreciated caseload midwifery and their partners also benefitted from it, as they all felt that the midwives acknowledged and treated them as individuals. This good relationship led to a positive cycle in which mutual recognition and consideration supported the sense of coherence. Thus, some of the constituents of caseload midwifery were the multiple considerate acts midwives performed for their couples. However, the fact that drawbacks also existed indicated that the experience of working in caseload midwifery depended on the midwives' ability to handle the strong obligation always to perform well, as this obligation might threaten her work-life balance. Moreover, the shared decision-making approach was appreciated greatly in caseload midwifery, but the balance between the couples' wishes and the midwives' professional knowledge might be difficult to maintain if the relationship is too close. Together with the midwives' perceived obligation to be there for all of their women this could lead to a negative cycle with the result of a more active approach to labour followed by impaired neonatal outcome. However, the organisation of this model of care also needs consideration, as a high on-call workload, long calls, and being superseded by a midwife unfamiliar to the woman might put pressure on the midwife to rush labour to be ready for the next women.

Chapter 9. CLINICAL AND RESEARCH IMPLICATIONS

9.1 CLINICAL IMPLICATIONS

With respect to the present model of care, we have to discuss with the midwives the more active approach to labour which seem to result in impaired neonatal outcome. Both couples and midwives enjoyed and participated in shared-decision making but in particular multiparous influence on decision-making need considerations. Moreover, the basic constructs of this model need a thorough discussion as the reluctance to be superseded by a midwife unknown to the couple might lead to too long working-hours. Further, the work-life balance needs to be continuously addressed to ensure the well-being of the midwives.

Whether some of the very positive constituents of caseload midwifery can be transferred to conventional care needs consideration, because although caseload midwifery seems to have many advantages, it probably will never be accessible to all women. The constituents of caseload midwifery are found to be multiple considerate acts. For example, the couples appreciated receiving the midwife's phone number at the first visit and regarded this as their lifeline to professional support. They enjoyed being met by an engaged midwife who answered the phone, expressed joy, and sounded welcoming when the long anticipated labour finally began. At the hospital, the couples valued being called by name, but also being able to have their known (and named) midwife. The couples felt that their stories and wishes were registered and remembered, and they appreciated that the midwife prioritized staying and performing individual care, and, if that was not possible, they valued being informed of the extenuating circumstances. Finally, the couples appreciated that the midwives were interested in their well-being after the labour, as they received a text or a call from the midwife several days after childbirth.

9.2 RESEARCH IMPLICATIONS

Continuity of care requires further research. It is important to investigate the more active approach and the neonatal outcomes in caseload midwifery, and future research must use data on the different caseload models used in Denmark to investigate their outcome and pinpoint benefits and drawbacks.

Further research is also needed that focuses on how or whether caseload midwives perceive that drawbacks influence their work. Future research should include interviews with midwives who have left caseload midwifery because of the work-form. The way in which the midwifery managers experience caseload midwives and

their cooperation during long calls requires further investigation. Further, midwives' level of burnout, compassion fatigue, and psychosocial well-being also needs further research to ensure their well-being in caseloads midwifery.

Models of care in midwifery also needs further developing and monitoring to find a model of care that provides continuity of care, well-being and improves labour outcome

Chapter 10. LITERATURE LIST

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APPENDICES

Appendix A Literature search

Appendix B Semi-structured interview-guide for midwives

Appendix C Figurative interview-guide

Appendix D Semi-structured interview-guide for couples

Appendix E Information letter for midwives

Appendix F Information letters for women and partners

Appendix G Declaration of consent

Appendix E Information letter in the burnout study

Appendix A. Literature Search

A literature search was performedmore times during the process of writing the study protocol, and again while writing each of the four articles.

Cinahl, Psyk Info, Pub Med, Embase, and Cochrane Library were searched. In each database, the search was conducted in blocks. The blocks were not restricted to, but were created and expanded from initial search terms, including: (midwife/midwifery/nurse/midwives/midwifery care), (caseload/team care/continuity/care), (experience/attitudes/perspectives/feelings), (parents/mothers /fathers/pregnant), (burnout/work experience) or (outcome/patient outcome).

From the initial search terms, the search term indexed was found in the database chosen. Cinahl headings were the search terms indexed in Cinahl; MESH terms were used in Pub Med and the Cochrane Library, Thesaurus in Psyk Info, and "Advanced search terms" in Embase.

Within each search block, the searches were combined with "OR." Truncated free text searches on a specific topic/word were added by "OR" to try to ensure the width of the search. Thereafter, relevant blocks were combined in stages with "AND."

This search strategy was repeated in Cinahl, Psyk Info, Pub Med, Embase, and the Cochrane Library. To illustrate this strategy, Tables 1, 2, 3 and 4 list four search histories from Cinahl.

In addition to the systematic search, references also were searched by examining lists of the references in articles relevant to the study.

An internet search was conducted to ensure identification of the so-called "grey" literature. Google and Google Scholar provided relevant information and documents.

Table 1. Literature search for caseloading midwives' experiences

Search ID#	Search Terms	Results
S21	S14 AND S20	261
S20	S15 OR S16 OR S17 OR S18 OR S19	221,191
S19	interview*	169,816
S18	(observational or qualitative) N2 (study or studies or research or method*)	91,254
S17	(MH "Observational Methods+")	15,479
S16	(MH "Interviews+")	134,541
S15	(MH "Qualitative Studies+")	80,509
S14	S9 AND S13	600
S13	S10 OR S11 OR S12	372,030
S12	perspective* or experience* or attitude* or feeling*	372,030
S11	(MH "Life Experiences") OR (MH "Work Experiences")	16,245
S10	(MH "Midwife Attitudes")	1,120
S9	S4 AND S8	1,627
S8	S5 OR S6 OR S7	79,694
S7	Continuity N3 care	9,478
S6	(MH "Continuity of Patient Care+")	11,319
S5	caseload* OR team*	69,078
S4	S1 OR S2 OR S3	36,798
S3	midwive* or midwif*	36,798
S2	(MH "Midwifery+")	14,811
S1	(MH "Nurse Midwives") OR (MH "Midwives+") OR (MH "Midwifery Service+") OR (MH "Lay Midwives")	10,361

Table 2. Literature search for Couples' experiences in caseload midwifery

Search ID#	Search Terms	Results
S17	S13 AND S16	128
S16	S14 OR S15	122,278
S15	mother* or father* or parent*	121,774
S14	(MH "Parents+")	47,992
S13	S9 AND S12	600
S12	S10 OR S11	372,030
S11	(MH "Life Experiences")	12,352
S10	perspective* or experience* or attitude* or feeling*	372,030
S9	S4 AND S8	1,627
S8	S5 OR S6 OR S7	79,694
S7	Continuity N3 care	9,478
S6	(MH "Continuity of Patient Care+")	11,319
S5	caseload* OR team*	69,078
S4	S1 OR S2 OR S3	36,798
S3	midwive* or midwif*	36,798
S2	(MH "Midwifery+")	14,811
S1	(MH "Nurse Midwives") OR (MH "Midwives+") OR (MH "Midwifery Service+") OR (MH "Lay Midwives")	10,361

Table 3. Literature search for midwives' experiences of burnout

Search ID#	Search Terms	Results
S13	S9 AND S12	14
S12	S10 OR S11	5,652
S11	burnout*	5,652
S10	(MH "Burnout, Professional")	4,687
S9	S4 AND S8	1,627

S8	S5 OR S6 OR S7	79,694
S7	Continuity N3 care	9,478
S6	(MH "Continuity of Patient Care+")	11,319
S5	caseload* OR team*	69,078
S4	S1 OR S2 OR S3	36,798
S3	midwive* or midwif*	36,798
S2	(MH "Midwifery+")	14,811
S1	(MH "Nurse Midwives") OR (MH "Midwives+") OR (MH "Midwifery Service+") OR (MH "Lay Midwives")	10,361

Table 4. Literature search for outcomes of labour in caseload midwifery

Search ID#	Search Terms	Results
S14	S9 AND S13	280
S13	S10 OR S11 OR S12	370,513
S12	outcome*	358,546
S11	(MH "Health Services Research+")	14,226
S10	(MH "Outcomes (Health Care)+")	200,225
S9	S4 AND S8	1,627
S8	S5 OR S6 OR S7	79,694
S7	Continuity N3 care	9,478
S6	(MH "Continuity of Patient Care+")	11,319
S5	caseload* OR team*	69,078
S4	S1 OR S2 OR S3	36,798
S3	midwive* or midwif*	36,798
S2	(MH "Midwifery+")	14,811
S1	(MH "Nurse Midwives") OR (MH "Midwives+") OR (MH "Midwifery Service+") OR (MH "Lay Midwives")	10,361

Appendix B. Semi-structured interview guide for midwives

Interview af jordemødre foregår med udgangspunkt i den figurative interviewguide.

1. Hvornår blev du uddannet som jordemoder?
2. Hvor arbejde du herefter?
3. Hvornår blev du distriktsjordemoder?
4. Hvad er dine familiære forhold?
5. Hvor bor du i forhold til konsultation og sygehus?

6. Arbejde i distriktsjordemoderordning i forhold til dit tidligere arbejde
    - Hvad er forskellene i arbejdsformerne?
    - Hvad er fordelene ved at være distriktsjordemoder?
    - Hvad er ulemperne ved at være distriktsjordemoder?
    - Beskriv en arbejdsdag som almindelig jordemoder
    - Beskriv en arbejdsdag som distriktsjordemoder
    - Hvad er det helt særlige ved distriktsjordemoder ordningen?
    - Hvor vil du placere din kerneydelse
    - Hvilke forhold kunne få dig til at skifte arbejde?

7. Kendskab til kvinden og partnere
    - Hvordan lærer du kvinde at kende?
    - Hvordan viser det sig, at du kender hende?
    - Kan du beskrive en situation, hvor du føler, at det at du kendte hende gjorde en forskel?
    - Hvordan giver det sig udtryk, at kvinderne kender dig?
    - Hvad hjælper dig til at komme til at kende kvinderne?

    Kendskab til kvindens partner /familie
    - Hvordan lærer du partnere at kende?
    - Prøv at beskrive en situation, hvor du tænker, at partneren føler sig kendt

8. Arbejdet som distriktsjordemoder ift egen familie
    - Prøv at beskrive en situation, hvor du fik/får dårlig samvittighed overfor egen familie.
    - Overfor andre? Venner? Kolleger?
    - Hvordan får du afsluttet kontakten til familien?

9. Kompetencer
    - Beskrive hvilke kompetencer man skal som distriktsjordemoder
    - Hvorfor skal man have disse kompetencer?

- Hvilke karaktertræk skal man ikke have?

10. Forhold til arbejdspladsen
    - Hvordan vil du beskrive dit forhold til dine kolleger? Eksempel?
    - Hvordan vil du beskrive dit forhold til afdelingsjordemødrene? Eksempel?
    - Hvordan vil du beskrive dit forhold til chefjordemoderen? Eksempel?
    - Hvordan oplever du at jeres ordningen passer ind i systemet?

11. Forhold til arbejdsformen
    - Fortæl om det at være på kald i en uge
    - Kan du komme med et eksempel på, hvor det har været hårdt? – hvor det har været godt? Eksempler
    - Hvordan er det at være kaldt i mange timer? Eksempel
    - Andre taler om stress i "kendt jordemoder" hvordan har du det med det?
    - Hvordan vil du beskrive samarbejdet med de kolleger der er på arbejde, mens du er kaldt ind?
    - Hvordan er det at være kaldt på tværs af vagtskifte og datoer..?
    - Hvordan har du det med telefonen? (en tikkende bombe?)
    - Hvordan er det at være geografisk placeret i et lille lokalområde?
    - Hvad betyder det, at du er kendt i denne by?
    - Har du nogen gange dårlig samvittighed overfor kvinderne? Hvornår? Eksempel?

12. Graviditet og Fødsel
    - Hvad hvis nu der opstår komplikationer i graviditeten?
    - Hvad nu hvis, du ikke bryder dig om den gravide?
    - Hvad synes du, der er vigtig i forhold til fødslen?
    - Hvordan vil du beskrive et godt fremadskridende forløb på fødegangen?
    - Hvad hvis nu fødslerne ikke går godt?
    - Kan du beskrive en situation, hvor du har fyldt skyld?

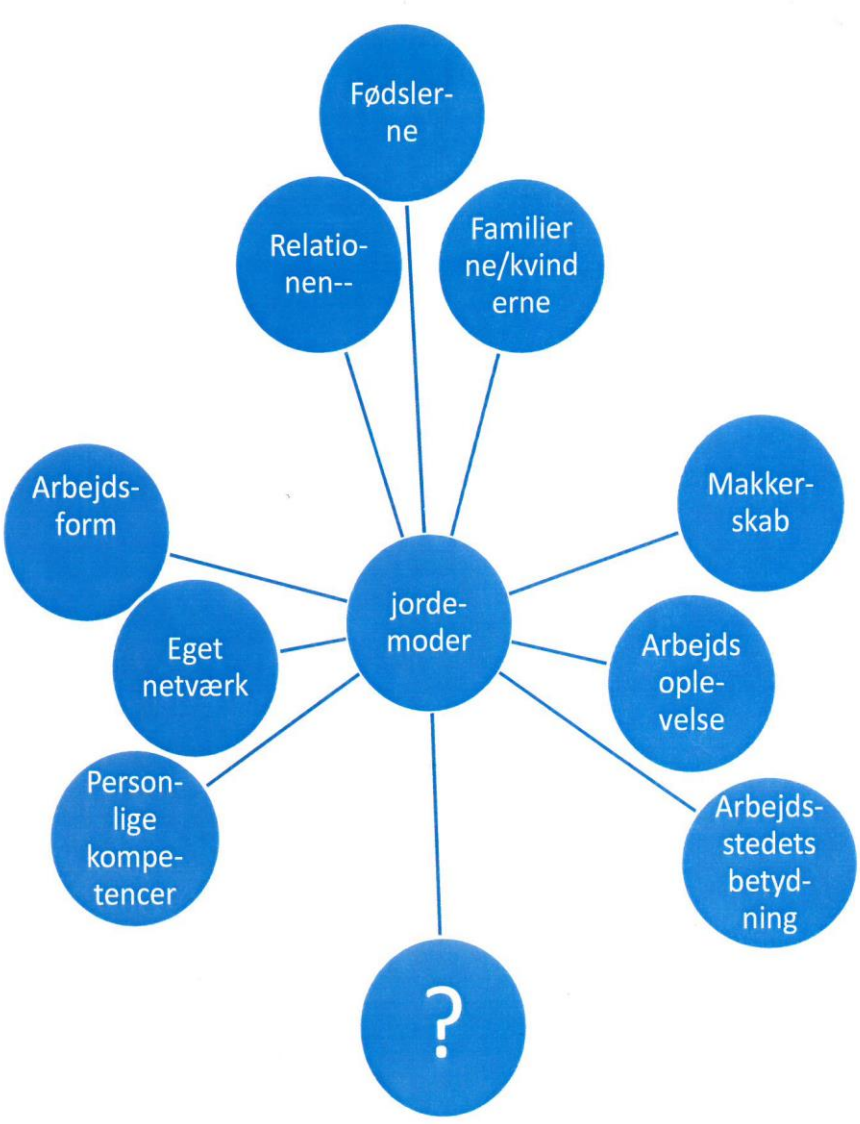
13. Makker
    - Hvad karakteriserer samarbejdet, som du har med din makker?
    - Giv et eksempel på, hvordan I bruger hinanden?
        - Hvad betyder eventuel forskellighed?

Har du noget på hjerte, jeg ikke har fået spurgt om? Og som du gerne vil have med?

Afrunding

Appendix C. Figurative interview guide for midwives

Figur med inspiration til områder under interview



Appendix D. Interview guide for couples

Igen indledes med spørgsmål inspireret af observationsstudiet målrettet det enkelte par.
Forskningsspørgsmål:
Hvad betyder kendt jordemoder for kvinden og hendes partner?
Hvordan influerer kendt jordemoder på de tidlige faser i fødslen?
Hvad karakteriserer forholdet til jordemoder?

Den aktuelle fødsel
Fortæl om hvordan fødslen startede og hvad der siden skete… (husk noter fra observationerne)

Start på fødslen samt fødslen (Kobling til registerstudiet)
Har parrene en særlig holdning til fødslen?

Kan du give eksempler på, hvad der er vigtigt under en fødsel?

- Hvordan var det at komme ind på hospitalet?
- Hvordan var det at blive indlagt?
- Var du på noget tidspunkt i tvivl om, hvad du skulle gøre? Hvornår var det? Og hvad gjorde du så?
- Hvordan ser du på varigheden af fødslen?
- Indgreb for eksempel drop eller kejsersnit? Oplevelse..
- Smertelindring, Oplevelse
- Kan du beskrive hvad du tænker om at føde normalt?

Har I deltaget i en form for fødsels forberedelse
- Og hvordan var det?
Hvordan har I mere generelt forberedt jer til fødslen?

Hvordan er det at være en del af distriktsjordemoderordningen
Fortæl om hvordan det er at have en kendt jordmoder

- Kan du beskrive hvad det betyder for dig….?
- Hvornår følte du at jordemoderen blev ”kendt” for jer – hvis hun blev det?
  - Giv eksempel fra graviditet
  - Giv eksempel under fødsel og efter fødsel

Kan du give eksempler på, hvordan det er godt at have den samme jordemoder? Kan du give eksempler på, at det kunne være problematisk at have den samme jordemoder?

- Hvordan er det at vide, at det højst sandsynligt bliver en af disse jordmødre?
- Hvad nu hvis man ikke kan lide jordemoderen?
- Hvordan har du det med, at jordemødrene har ferie-lukket?

Havde I samme jordemoder under fødslen som i graviditeten?

- Hvis samme jordemoder:
- Har I tænkt over, hvordan det ville have været at skifte jordemoder?
- Kunne du have tænkt dig at skifte jordemoder? – hvorfor?

Partner

Har han/du mødt jordemoderen?

Kender han/du jordemoderen?

- Hvordan kommer det til udtryk?

Hvad med far/partner føler han/du sig kendt ?

- Hvordan kommer det til udtryk, at jordemoderen kender dig?

Hvad betyder det for dig, at du kender eller ikke kender jordemoderen?

(Hvis betydning) Kan du give eksempel på at føle sig kendt af jordemoder?

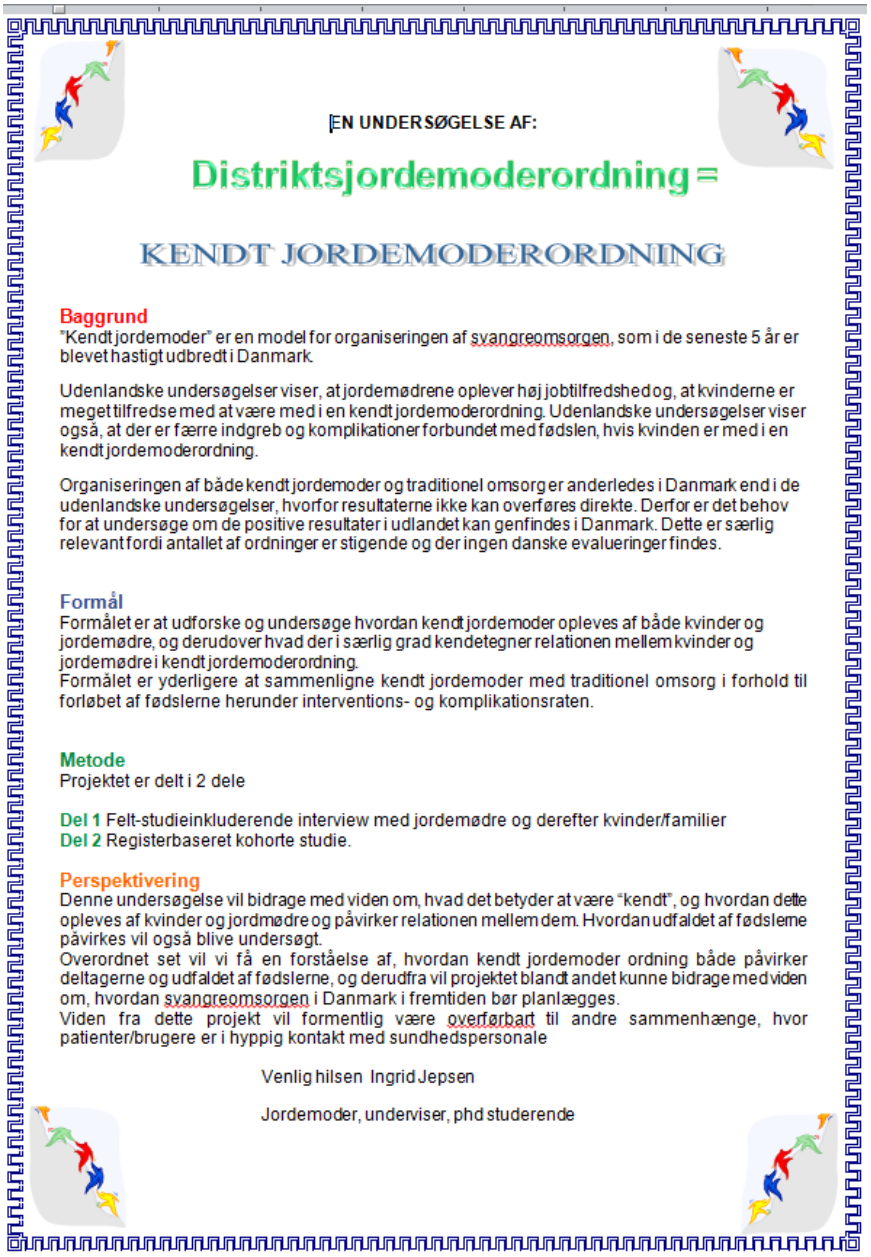
Kobling til jordemødrenes oplevelser i studie 1

Hvordan oplever I/du forholdet til jordemoderen som person? Og som professionel? (jdm siger "affære", intenst forhold, professionel ven)

- Hvad kan dette forhold sammenlignes med?
- Hvad ved du om dinejordemødre?
- Hvad tænker du om at have jordemoderens telefonnummer?
- Hvordan har du brugt telefonen til jordemoderen?
- Hvordan oplever du/I jordemoderens engagement?
- Hvilke forventninger har du til jordemødrene i kendt ordning?

- Hvad er det bedste ved systemet?
- Hvad er det værste ved systemet?

Appendix E. Information letter for midwives



EN UNDERSØGELSE AF:

Distriktsjordemoderordning =

KENDT JORDEMODERORDNING

Baggrund
"Kendt jordemoder" er en model for organiseringen af svangreomsorgen, som i de seneste 5 år er blevet hastigt udbredt i Danmark.

Udenlandske undersøgelser viser, at jordemødrene oplever høj jobtilfredshed og, at kvinderne er meget tilfredse med at være med i en kendt jordemoderordning. Udenlandske undersøgelser viser også, at der er færre indgreb og komplikationer forbundet med fødslen, hvis kvinden er med i en kendt jordemoderordning.

Organiseringen af både kendt jordemoder og traditionel omsorg er anderledes i Danmark end i de udenlandske undersøgelser, hvorfor resultaterne ikke kan overføres direkte. Derfor er det behov for at undersøge om de positive resultater i udlandet kan genfindes i Danmark. Dette er særlig relevant fordi antallet af ordninger er stigende og der ingen danske evalueringer findes.

Formål
Formålet er at udforske og undersøge hvordan kendt jordemoder opleves af både kvinder og jordemødre, og derudover hvad der i særlig grad kendetegner relationen mellem kvinder og jordemødre i kendt jordemoderordning.
Formålet er yderligere at sammenligne kendt jordemoder med traditionel omsorg i forhold til forløbet af fødslerne herunder interventions- og komplikationsraten.

Metode
Projektet er delt i 2 dele

Del 1 Felt-studieinkluderende interview med jordemødre og derefter kvinder/familier
Del 2 Registerbaseret kohorte studie.

Perspektivering
Denne undersøgelse vil bidrage med viden om, hvad det betyder at være "kendt", og hvordan dette opleves af kvinder og jordmødre og påvirker relationen mellem dem. Hvordan udfaldet af fødslerne påvirkes vil også blive undersøgt.
Overordnet set vil vi få en forståelse af, hvordan kendt jordemoder ordning både påvirker deltagerne og udfaldet af fødslerne, og derudfra vil projektet blandt andet kunne bidrage med viden om, hvordan svangreomsorgen i Danmark i fremtiden bør planlægges.
Viden fra dette projekt vil formentlig være overførbart til andre sammenhænge, hvor patienter/brugere er i hyppig kontakt med sundhedspersonale

Venlig hilsen Ingrid Jepsen

Jordemoder, underviser, phd studerende

Appendix F. Information letter for women and partners

Kære gravide og partner

Jeg er ved at undersøge brugernes oplevelse af "Distriktsjordemoder-ordningen", som du/I er med i.

Ved at følge nogle gravide under fødslen (som fluen på væggen) og interviewe dem bagefter, forsøger jeg at finde frem til, hvordan det opleves og hvad det betyder for gravide at være en del af distriktsjordemoderordningen.

Vil du give lov til, at din jordemoder ringer efter mig, når I tager på fødegangen, således at jeg er med til fødslen? Bagefter vil jeg gerne interviewe dig/jer om din/jeres oplevelse. Det kan være dagen efter på sygehuset, men det kan også være senere hjemme hos jer.

Du kan også bidrage ved kun at lade dig interviewe.

Venlig hilsen

Ingrid Jepsen

Jordemoder, phd studerende, underviser på jordemoderuddannelsen

Email: irj@ucn.dk Mobil: 72690980

Appendix G. Declaration of Consent

(S1)

Informeret samtykke til deltagelse i et sundhedsvidenskabeligt forskningsprojekt.

Forskningsprojektets titel: Kendt jordemoder: Hvordan opleves kendt jordemoder af kvinder og jordemødre og hvordan påvirker kendt jordemoder fødslen mht fødselsprocessen, interventionsraten og antallet af komplikationer

Erklæring fra forsøgspersonen:

Jeg har fået skriftlig og mundtlig information og jeg ved nok om formål, metode, fordele og ulemper til at sige ja til at deltage.

Jeg ved, at det er frivilligt at deltage, og at jeg altid kan trække mit samtykke tilbage uden at miste mine nuværende eller fremtidige rettigheder til behandling.

Jeg giver samtykke til, at deltage i forskningsprojektet, og har fået en kopi af dette samtykkeark samt en kopi af den skriftlige information om projektet til eget brug.

Forsøgspersonens navn:
_____

Dato: _____ Underskrift:

Ønsker du at blive informeret om forskningsprojektets resultat samt eventuelle konsekvenser for dig?:

Ja _____ (sæt x) Nej _____ (sæt x)

Erklæring fra den, der afgiver information:

Jeg erklærer, at forsøgspersonen har modtaget mundtlig og skriftlig information om forsøget.

Efter min overbevisning er der givet tilstrækkelig information til, at der kan træffes beslutning om deltagelse i forsøget.

Navnet på den, der har afgivet information:

Dato: _____ Underskrift:

Appendix H. Information letter in the burnout study

2808 2014

Kære jordemødre

D. 1/9 vil der i jeres dueslag ligge et spørgeskema, som jeg har fået lov til at omdele i forbindelse med mit ph.d. projekt.

Jeg har fået Lisbet Hammers tilladelse til at uddele spørgeskemaet, som handler om jordemødres udbrændthed.

Afdelingens interesse for denne undersøgelse omkring udbrændthed er at undersøge, hvordan I har det.

Min interesse for udbrændthed blev vakt ved den internationale kongres for jordemødre (ICM) i Pragh, hvor jeg hørte om studier af udbrændthed fra Australien og New Zealand. Studierne viste en forskel alt efter, hvordan jordemødrene organisatorisk set arbejdede med de gravide/fødende - og her kommer min undersøgelse af distriktsjordemoderordningerne ind.

Undersøgelsen foregår ved hjælp af et valideret spørgeskema fra Det Nationale Forskningscenter for Arbejdsmiljø. Det valgte spørgeskema blev udviklet i forbindelse med PUMA undersøgelsen, som nogle af jer måske kender. Udbrændthed deles i dette skema op i tre dele: Personlig udbrændthed, Arbejdsrelateret udbrændthed og klientrelateret udbrændthed, og der er spørgsmål indenfor disse tre kategorier. Derudover spørges der til, hvilke arbejdsfunktioner I har og hvor mange år sådan cirka, I har været uddannede som jordemødre, men bortset fra disse oplysninger er I anonyme.

Jeg eftersøgte før sommerferien jordemødre, der ville være med til at planlægge og udføre undersøgelsen og Line, Annette og Pia har meldt sig. Dette for at sikre, at uddelingen af de nummererede skemaer foregår helt tilfældigt så anonymiteten sikres.

Spørgeskemaet fylder kun to sider og er ren afkrydsning.

Undersøgelsen er selvfølgelig frivillig, men vi håber, at I alle vil være med for at resultaterne skal kunne give mening både for Lisbet Hammer og for mit studie.

Skemaerne skal afleveres hurtigst muligt men senest d. 17/9. De skal puttes i postkassen, der vil stå på det nye skrivebord ved siden af taskeskabet.

Venlig hilsen

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