PARENTS' POSTNATAL SENSE OF SECURITY (PPSS)- developing an instrument and description of important factors based on mothers' and fathers' experiences

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PARENTS' POSTNATAL SENSE OF SECURITY (PPSS)

- developing an instrument and description of important factors based on mothers' and fathers' experiences

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Att våga är att förlora fotfästet en liten stund, att inte våga är att förlora sig själv

Søren Aabye Kierkegaard

Husk, det er ikke farten som teller, men retningen

Okänd från Norge

CONTENTS

ABSTRACT

The overall aim of this thesis was to develop and evaluate a specific instrument, measuring both mothers' and fathers' postnatal sense of security during the first postnatal week, and to explore and describe important factors associated with this.

Data was collected from 2003 to 2009. The thesis has a methodological (Paper I), an evaluative (Paper II) and an explorative and descriptive design (Paper III and IV). In Papers I and II, 113 mothers and 99 fathers took part. Their infants had been born live at term, at one of the five hospitals in southern Sweden. In Papers III and IV, 14 mothers and 13 fathers from two hospital areas, encompassing five different postnatal wards in Southern Sweden, were interviewed. Statistical analysis of the instrument, testing for construct validity with explorative factor analysis, internal consistency reliability and concurrent validity, using a specific item about experienced sense of security (Paper I) and Mann-Whitney U-test, multiple linear regression analysis as well as multiple logistic regression analysis (Paper II), was carried out. The Parents' Postnatal Sense of Security (PPSS) instrument developed in Paper I was used for evaluation in Paper II. In Paper III and Paper IV the transcribed texts were analysed using qualitative content text analysis.

The PPSS instrument, mother's version, was reduced to 18 items (explained variance 66.8%, Cronbach's coefficient alpha 0.88) comprising of the following dimensions; a sense of the midwife's empowering behaviour, a sense of general wellbeing, a sense of affinity within the family and a sense that breast feeding was manageable. The father's version was reduced to 13 items (explained variance 69%, Cronbach's coefficient alpha 0.77) and comprising of the following dimensions; a sense of the midwife's empowering behaviour, a sense of the mother's general wellbeing including breast feeding, a sense of general wellbeing and a sense of affinity within the family (Paper I). In Paper II a sense of the midwife's empowering behaviour, a sense of ones own general wellbeing and a sense of the mother's wellbeing, as experienced by the father, were significantly associated with a single item about experienced sense of security. Besides general anxiety, measured by the STAI-trait instrument, and parity, a sense of participation during pregnancy was a significantly associated background variable for postnatal sense of security, for both parents. For the mothers, a sense that the father was participating was also significant (Paper II). Paper III showed that postnatal sense of security for mothers included the following on eight categories; Being met as an individual, Being given relevant information, Being prepared for the time after birth, Having someone to turn to – knowing who to ask, Having partner and/or significant others close at hand, Mother's and the baby's own resources, Being assured that her one physical health was good and Having planned follow-ups after discharge. For fathers (Paper IV) "Participation in the process of childbirth" emerged as a main category and included the following six categories; Willingness to participate and take responsibility, Being given the opportunity to take responsibility, Mother's and baby's wellbeing, Having someone to turn to – knowing who to ask, Being met as an individual and Experiencing competent staff.

The newly developed PPSS instrument is a valid and reliable instrument and the only specific postnatal instrument measuring both parents' postnatal sense of security. However it needs to be tested further when the new items are amalgamated (Paper III and IV). Midwives empowering support during the childbirth process, as well as the father's participation and involvement are important factors beneficial, for both parents' postnatal sense of security. An empowering organization must give fathers the opportunity to stay overnight at hospital and offer staff availability as well as planned follow-ups of both mother and child.

ABBREVIATIONS

PPSS	Parents' Postnatal Sense of Security
WHO	World Health Organisation
STAI	State Trait Anxiety Inventory
EPDS	Edinburgh Postnatal Depression Scale
MGI	Mother – Generated Index
PDSS	Postpartum Depression Screening Scale

DEFINITIONS

In this thesis the term:

- Postnatal implies just the first week after delivery.
- Midwife has been used predominantly but the professional category can also be other staff e.g. a nurse.
- Father has been used although we acknowledge that there are other family constellations.

ORIGINAL PAPERS

This thesis for the degree of Doctorate is based on the following Papers referred to in the text by their Roman numerals:

I Persson EK, Fridlund B, Dykes A-K. Parents' postnatal sense of security (PPSS): development of the PPSS instrument. Scand J Caring Sci, 2007; 2(1): 118-125.

II Persson EK, Dykes A-K. Important variables for parents' postnatal sense of security: evaluating a new Swedish instrument (the PPSS instrument). Midwifery, 2009; 25(4): 449-460.

III Persson EK, Kvist LK, Fridlund B Dykes A-K. Mothers' Sense of Security the first postnatal week: an interview study in Sweden. Resubmitted J Adv Nurs.

IV Persson EK, Kvist LK, Fridlund B, Dykes A-K. Fathers' Sense of Security the first postnatal week: a qualitative interview study in Sweden. Submitted.

INTRODUCTION

Midwifery care researchers from industrialized countries have recently turned their attention to the improvement of postnatal services [1-3]. Studies have shown that parents are more dissatisfied with postnatal care than with other areas of maternity care [4, 5]. Persson and Dykes [6] and Fredriksson et al. [7] illuminated that a sense of security is important for parents' experience of the first postnatal week, as individuals, as a couple and as a family. According to Andersson [8] feelings of security or insecurity are individual experiences, which always must be seen in relation to the specific context.

Traditionally, both postnatal care and research have focused on the mother and child [4, 9, 10]. However, during the last decades attention has been given to the father's role [11]. Today, demands and expectations, from both parents, concerning the father's participation during childbirth, responsibility for the child and equal participation in family life, have increased, especially in the industrialised world [12-17]. According to WHO [11] an increased involvement by men in maternity care increases the mother's, father's and child's wellbeing. The mother's physical and emotional experiences during the childbirth period influence her continued wellbeing [6, 18, 19]. Studies also show that the father's experiences during the childbirth period influences his following wellbeing [11, 13, 20, 21] the couple's relationship [6, 21] and also affects the child [11, 22]. Becoming a father, particularly for the first time, is for most men a time of change in self identity and in the relationship with their partner [12]. It is shown that an involved father has positive effects on the attachment to his child [23-25]. Therefore, it is important to have a family oriented focus in all maternity care [4, 7, 9, 11, 17, 26] and to include the father in research concerning the childbirth period [4]. Postnatal care settings, which strengthen the father's participation, can, in that way, increase the whole family's sense of security [7, 15].

To be able to develop future postnatal maternity care with regard to both parents' sense of security, a specific instrument measuring influencing factors within the first postnatal week is needed. It is important not only to evaluate parents' postnatal sense of security but also to find factors which can be influenced and supported by health care professionals. An increased understanding of both parents' situation is essential. By focusing on the paternal as well as the maternal perspective, the father's position can be consolidated, gender equality can increase and the family unit can be strengthened. This can lead to increased paternal participation in child care and family life.

BACKGROUND

Postnatal care settings and their influences on parents' experiences

According to WHO [27], postnatal care should be holistic and family-oriented, including each individual family member, as well as the whole family unit. Postnatal care differs between countries and also between hospitals. The mean length of postnatal hospital stay in Sweden, for healthy women experiencing a normal delivery, is approximately 2 days [28]. Fathers in Sweden have the right to 10 days parental leave in connection with the birth of their child. In Sweden midwives work as primary care providers in postnatal care, for low risk women. Women who experience risk pregnancies and births are, in Sweden cared for on traditional wards. In this form of care, fathers and siblings do not usually stay overnight. An alternative, which is relatively common in Sweden for low risk women, is called "hotel care" or "family suites". This form of care usually enables the father to stay overnight and the family to be together to a greater extent [6, 7, 15, 29]. In addition, the mother and child can leave the hospital six hours after childbirth, early discharge. In this situation, the father and siblings are given the possibility to take a more active and participating role [7, 29]. In Sweden, families are offered a home visit by a child health nurse after hospital discharge.

Though different care settings exist, discussion about postnatal care is often reduced to a discussion about discharge time and how this influences maternal and infant wellbeing, particularly regarding breast feeding and tiredness [4, 30-33]. The father's encouraging support and knowledge about breast feeding is considered important for breast feeding success [34-37]. Care settings that enable the whole family to be together and encourage the father to participate in that way, positively influence breast feeding [36]. Experiencing a restful environment is also shown to be important [38]. Several studies has shown that giving fathers the opportunity to stay overnight at the postnatal ward and to be involved in care of the newborn child are important for both parents' satisfaction with postnatal care [5, 38, 39]. Fathers who did not stay overnight at the postnatal ward were also shown to be more dissatisfied with support from staff [39]. Postnatal care settings which strengthen the father's involvement can increase the whole family's sense of security [6, 15]. Ellberg et al. [40] showed that family oriented postnatal care models were both cost-minimizing and increased parents' satisfaction. A Swedish study [41] showed that involving fathers in the care of their child, early after birth, decreased the divorce rate.

Support and attitudes from staff

The relationship with the midwife plays a central role for experience of and satisfaction with maternity care [5, 7, 39, 42-44]. Midwives are not always meeting parents' needs of support [15, 37]. Support, counselling, understanding and information given in the

postnatal period, provides benefits in psychological wellbeing and a decrease in anxiety and depression [18, 45]. The experience of good care appeared to be related to the midwife's communication and behaviour and her ability to meet the individual couple just as they were [46]. Hunter et al. [46] described relationship between the midwife and the mother as "the warp threads that hold it all together" (page 136). Halldórsdóttir and Karlsdóttir [42] have described the difference between caring and uncaring midwives. Their research showed that a caring midwife, during childbirth, inspired confidence and trust. The caring midwife was experienced as supportive whereas the uncaring midwife was considered obtuse. According to Olafsdottir [47] a trusting relationship is based on reciprocity. A trusting relationship has also been described in terms of being listened to, being there, being supported, being guided on one's own terms and being seen as an individual [38, 48, 49]. Yelland et al. [50] implied that care must focus on the individual rather than on routine observations.

The importance of staff attitudes towards the family is highlighted in several studies [1, 51, 52]. A supportive, respectful and flexible attitude, coupled with continuity of information and consistent advice, fosters a positive postnatal experience [6, 45, 53]. However, lack of sensitivity, a dominating attitude, inconsistent information and the feeling that the midwife appears not to have time, fosters a negative postnatal experience [54]. These feelings are associated with dissatisfaction with postnatal care [39]. Problems with contradictory advice and lack of time are also brought to light in recent research [1, 26, 38]. Staff who are "in a rush" or inflexible are a hindrance to the quality of postnatal care [38].

Studies also highlight the importance of giving expectant mothers realistic expectations about parenthood and the time after childbirth [55-57]. Tammentie et al. [56] showed that there was a discrepancy between expectations and reality in postnatal depressed mothers. Nelson [58], pointed to the importance for midwives in facilitating maternal transition by being sensitive to maternal antenatal insecurity. According to Young [57] it was important for midwives to initiate antenatal classes early in pregnancy, involvement for fathers and information on practical, emotional and relationship changes to prepare mothers for the postnatal period. All these studies only investigate the maternal situation. However, Hallgren et al. [59] revealed that it is also important for the midwives to discuss expectations with regard to men's roles and to meet fathers as well as mothers, individually. A need for improvement in preparation for parenthood and the importance of including the father is shown to be important [60, 61]. Expectant fathers want to be seen and heard by the health care professionals and they wish to be involved from the start of pregnancy care [37, 61, 62]. Other studies show that fathers would like to get more support and be involved as individuals in both labour/delivery and the postnatal period [12, 15, 21, 39, 63-65]. In postnatal care, fathers often have a feeling of being excluded from the mother-child unit [12, 15, 65, 66]. Fathers want to be involved in care of the newborn child, but fathers' involvement is not always supported by staff [13, 15, 21, 37]. De Montigny and Lacharite [21] also highlighted the importance of the midwives role to encourage the parents in their relationship, as a couple, in the postnatal period.

The parents' relationship and the wellbeing of the family

A close relationship with their partner seems to be important for both parents' postnatal experiences and wellbeing [5, 6, 7, 15, 67-69]. Matthey et al. [67] and Morse et al. [70] found that the function of the relationship was predictive of postnatal distress, in both men and women. The close relationship between the parents is just as important for fathers as for mothers [7] and can also affect the relationship between the father and the child [71]. According to Gjerdingen and Center [68] the woman's partner-satisfaction is the strongest factor for father's postnatal wellbeing.

Several studies point out the importance of the labour/delivery experience for the total birth experience and wellbeing [20, 21, 43, 59]. Even the father's experiences during this process influence his subsequent emotional wellbeing [11, 20, 72]. Maternal postnatal wellbeing has often been described as connected to physical problems [73]. However, according to Symon et al. [74] only a few mothers grade physical wellbeing as most important for their overall wellbeing. To become a father particularly for the first time, can be more difficult and distressing than fathers expect [12]. Rydén [75] showed, in a Swedish study, that one third of the mothers were unhappy and felt anxious and as many fathers were not happy with the situation during the first postnatal weeks. Difficulties described were e.g. commitment around the child, isolation and longing for a social network, difficulties with older children and conflicts in the couple's relationship. Skari et al. [76] showed in their Norwegian study that 37% of the mothers and 13.5% of the fathers reported psychological distress a few days after childbirth. According to Ramchandani et al. [22] paternal as well as maternal depression and wellbeing affect a child's early and behavioural development. Feldman [77] concluded that mothers and fathers are equally capable of engaging and interacting with their child. Studies also show that maternal behaviour and interaction with the child shortly after birth predict secure or insecure attachment of the child six and 12 months after childbirth [78, 79]. According to Sullivan [24], father - child attachment, became stronger the more the father was involved during the birth and postnatal period. Pruett [23, 80] showed that a father, with a strong attachment to his child already from childbirth, was subsequently more involved with the child. Pruett [80] particularly highlighted that fathers must be involved in the physical care of the child and that health care professionals have a responsibility to encourage and permit the fathers to do that from the very beginning. Pruett [23] also found that secure paternal - child attachment was as important for the child as maternal - child attachment.

Theoretical standpoints

Theoretical standpoints have been taken from a qualitative interview study [6] about sense of security and a literature review.

A sense of security – an interview study

According to Persson and Dykes [6] important categories for a sense of security the first week after childbirth were for both parents *a sense of the midwife's empowering behaviour, a sense of affinity within the family, a sense of autonomy/control and a sense of wellbeing including manageable breast feeding.* Independent of whether the postnatal care took place in hospital or in the parents' home, the sense of the midwife's behaviour, offering encouragement and a positive, empowering, receptive attitude, complete information and practical advice were important for a sense of security. Possibility to go back to the maternity care unit, home visits by a midwife and availability (the possibility to contact someone at the unit by telephone, at any time) also added to both parents' sense of security. Affinity within the family, involved affinity between the couple, paternal participation, the father's support in giving practical help and affinity with siblings and appeared to be very important in experiencing a sense of security. To be able to decide for oneself and to experience a sense of control and thereby be able to take responsibility for the whole situation was a very important condition. The midwife's approach enabled the couples to feel that it was their child and their birth, that they could influence the proceedings and thereby feel that they were participating, which enhanced their sense of security. To have a feeling of being respected gave a sense of self-determination, which had a positive effect on the sense of affinity within the family. An overall feeling of wellbeing for both parents was besides their own wellbeing, dependent on that the baby was healthy, and that breast feeding was manageable. The possibility to sleep and rest also seemed to be important for a sense of security, the first week after childbirth.

A sense of security – a literature review

Personal choices, to be able to decide for ones self and to take responsibility are important for a sense of control, as well as for a sense of security [7, 8, 51, 81, 82]. The security a person experiences depends, according to Andersson [8], on both basic security, the sense of security one has from earliest childhood and situation-related security, where specific situations give a feeling of security or insecurity. Situation-related security consists of material, environmental, relational and knowledge/control security. For knowledge and control, information is important. Furthermore, Andersson [8] implied that constructive life experiences can have a positive effect on basic security. Experience during childbirth is one example of a situation-related experience which can be constructive. Andersson-Segesten [83] described the Swedish concept "trygghet" (a sense of security) as multidimensional - including security, safety, confidence, certainty and trust. Melender and Lauri [51, 81] as well as

Melender [82] found that a sense of security for mothers, in the childbirth period, was associated with maternity health care, social support, a sense of control, the mothers' own attitudes and support from their partners. Löf et al. [84] found that being able to meet the needs of the baby, feeling "back to normal" and receiving support gave first-time mothers a feeling of confidence and security. Nada [85] meant that the role of midwives is to provide a sense of security to mothers in the postnatal period. This is in accordance with the findings of Kvist and Persson [86] who showed that being met with attention as an individual by the postnatal midwives was one of the most important factors for mothers' sense of postnatal security.

Postnatal instruments - a literature review

Three specific instruments for the postnatal period have been found but were only developed for mothers: The Edinburgh Postnatal Depression Scale (EPDS) [87] measuring risk for postnatal depression, the Postpartum Depression Screening Scale (PDSS) [88] for detection of postpartum mood disorders and the Mother-Generated Index (MGI) measuring subjective postnatal quality of life [74]. No instrument has been found to evaluate the father's situation during the postnatal period. However the EPDS is in some studies used for men [89, 90]. The STAI (State Trait Anxiety Inventory) instrument [91] has been developed for measuring anxiety, were the STAI-trait instrument measures a person's degree of anxiety "in general". The STAI-instrument is, however, not a specific instrument for the postnatal period but is used for evaluating anxiety in this situation, for both mothers and fathers [92, 93]. Degree of basic security/insecurity is, in this thesis (Paper I and II), compared to trait - anxiety as described by Spielberger et al. [91].

Rationale

To summarize, it is relevant to explore and describe important factors associated with parents' postnatal sense of security and no instrument measuring the parents', particularly the father's, sense of security in the immediate postnatal period has been found. By using a specific instrument, measuring positive influencing factors, health care professionals can be guided to develop care in a positive, empowering way. Thereby the postnatal care can better be adjusted to parents' specific needs and to strengthen their own resources, which in turn could be beneficial to the whole family unit. This also could give the health care system the possibility to allot specific resources to families needing special help and support.

AIMS

The overall aim of this thesis was to develop and evaluate a specific instrument, measuring both mothers' and fathers' postnatal sense of security during the first postnatal week and to explore and describe important factors associated with this

Specific aims:

- to develop a specific instrument to assess both mothers' and fathers' postnatal sense of security concerning the first postnatal week (Paper I)

- to evaluate dimensions of both parents' postnatal sense of security during the first week after childbirth, and to determine associations between the PPSS instrument and different socio-demographic and situational background variables (Paper II)

- to explore and describe factors which influence mothers' (Paper III) and fathers' (Paper IV) sense of security the first postnatal week

STUDY POPULATION AND METHODS

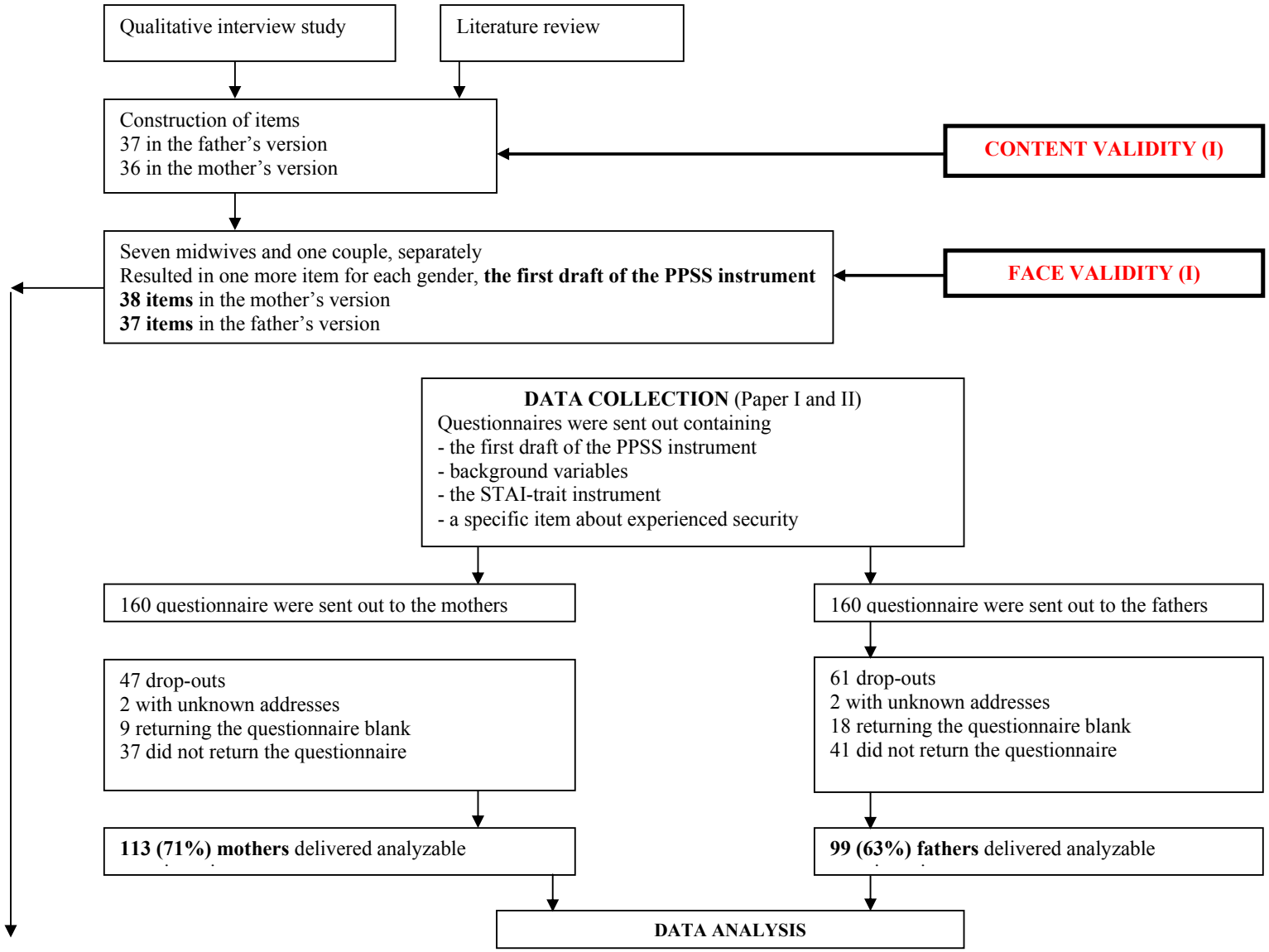
Design and settings

This thesis has a methodological design (Paper I), an evaluating design (Paper II) and an explorative and descriptive design (Paper III and IV). An instrument measuring Parents' Postnatal Sense of Security (the PPSS instrument) based on a qualitative interview study [6] and a literature review was developed in Paper I. In Paper II the PPSS instrument was used and tested. In Paper III and IV mothers' and fathers' respectively, from two hospital areas encompassing five different postnatal wards in Southern Sweden were interviewed. Two of the wards were hotel-like with family rooms, one which was unstaffed during the night. Staff from the nearby postnatal (risk) ward were on-call to the parents. One ward was a combined delivery suite and postnatal ward and two were traditional postnatal wards. The mean length of postnatal stay was two days and families were in most cases offered a home visit by a child health nurse after hospital discharge.

An overview of the methods is illustrated in table 1 and the logistic procedure in Figure 1.

Table 1. Overview of the design, participants, data collection and data analyses in the different Papers of the thesis.

	Paper I	Paper II	Paper III	Paper IV
Design	Methodological	Evaluative	Explorative and descriptive	Explorative and descriptive
Participants	113 mothers and 99 fathers		14 mothers	13 fathers
Data collection	Questionnaire including background variables and items developed from a qualitative interview study and literature review were sent out eight weeks after childbirth asking about the first postnatal week	Background variables, the PPSS-instrument a specific item about experienced security and the STAI-trait instrument	Focus group interviews and individual interviews	Focus group interviews and individual interviews
Data analyses	Content validity Construct validity with explorative factor analysis using principal component analysis (PCA). Internal consistency reliability, Concurrent validity with Spearman correlation.	Mann-Whitney U-test, multiple linear regression analysis (stepwise) Multiple logistic regression analysis (backward, likelihood ratio).	Qualitative content analysis	Qualitative content analysis


Qualitative interview study
Literature review
Construction of items
37 in the father's version
36 in the mother's version
CONTENT VALIDITY (I)
Seven midwives and one couple, separately
Resulted in one more item for each gender, the first draft of the PPSS instrument
38 items in the mother's version
37 items in the father's version
FACE VALIDITY (I)
DATA COLLECTION (Paper I and II)
Questionnaires were sent out containing
- the first draft of the PPSS instrument
- background variables
- the STAI-trait instrument
- a specific item about experienced security
160 questionnaire were sent out to the mothers
160 questionnaire were sent out to the fathers
47 drop-outs
2 with unknown addresses
9 returning the questionnaire blank
37 did not return the questionnaire
61 drop-outs
2 with unknown addresses
18 returning the questionnaire blank
41 did not return the questionnaire
113 (71%) mothers delivered analyzable
99 (63%) fathers delivered analyzable
DATA ANALYSIS

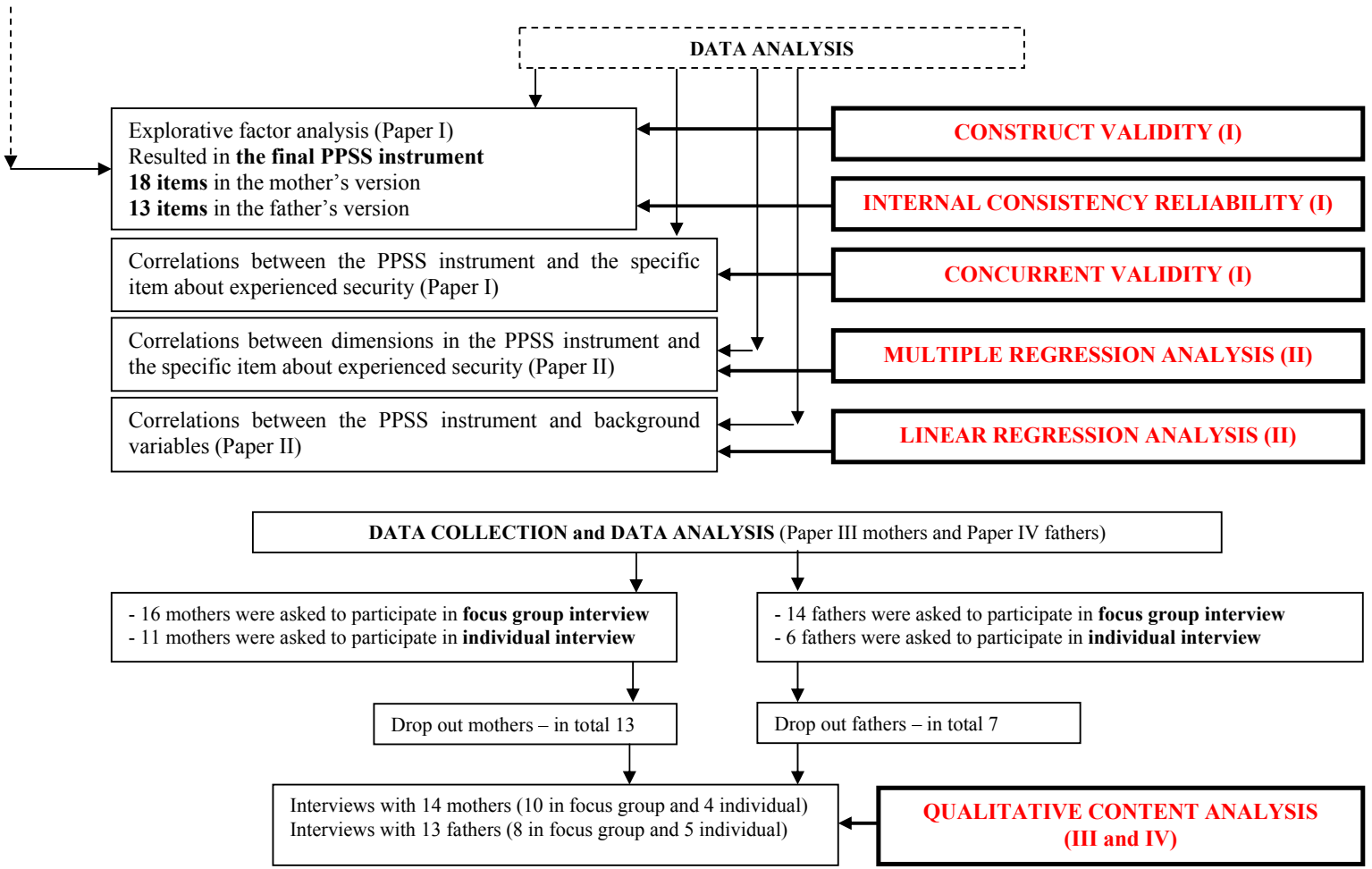


Figure 1. Flowchart over the logistic procedure in Paper I - IV.

Study population

In Paper I and II parents (n=360) of every fifth child (n=160 children), born at term (≥37 weeks) from five hospitals in southern Sweden, were chosen consecutively, between 12th November and 9th December 2003. The participating parents were the same in Paper I and Paper II. After two reminders analysable questionnaires were returned by 113 (71%) of the mothers and 99 (63%) of the fathers. The mean age for the mothers was 29.8 years (17-40) and for the fathers 32.4 years (21-52). Most of the parents were cohabitating (106 of the mothers and 94 of the fathers). For 52 (46%) of the mothers and 48 (49%) of the fathers it was their first child. Ninety nine (88%) of the mothers had experienced a normal vaginal birth and 89 (91%) of the fathers answered that their partner had had a normal vaginal birth. All deliveries were singleton. Twelve (11%) of the mothers and 7 (7%) of the fathers had basic school education (9 years), 53 (47%) of the mothers and 58 (59%) of the fathers had higher school education (12 years) and 44 (39%) of the mothers and 31 (31%) of the fathers had a university/college education. Of the mothers 92 (81%) and of the fathers 81 (82%) were born in Sweden. For the mothers mean discharge time was 69 hours (median 72, range 4-240) and for the fathers mean was 70 hours (median 72, range 7-240) (Paper II).

In Paper III and IV 14 mothers and 13 fathers respectively from two hospital areas encompassing five different postnatal wards in Southern Sweden were interviewed between May 2008 and June 2009. Inclusion criteria were that they or their partner had given birth to a live full term baby (≥37 gestational week) and that they spoke and understood the Swedish language.

Description of the participants is presented in detail in respective Papers (I-IV).

Data collection

Paper I and II

About eight weeks after they had given birth, questionnaires were sent out separately to mothers and fathers (a total of 320, 160 couples). All families got two letters, one addressed to the mother and one to the father of the child. The parents' addresses were officially available 8 weeks after birth, which was why the instrument was sent out at this time. The addresses were obtained from the birth registers at the hospitals involved. The number of answers required for each hospital had been calculated from the number of births at that department, during the same time period, the previous year.

The Questionnaire

The questionnaire consisted of background questions about socio-demographical variables, items about experiences in pregnancy and childbirth and the first version of the PPSS instrument. In addition one specific item about the sense of security

experienced the first postnatal week was asked. The STAI-trait instrument, measuring general anxiety was also included [91].

Background variables

Socio demographic and situational background variables such as age, parity (for the father, total number of children), education, marital status, mode of the birth, discharge time and country of birth were requested.

Situational questions about experiences during pregnancy and childbirth were also asked (10 questions for mothers and 9 for fathers).

- own sense of participation during pregnancy
- the mother's experiences of the father's sense of participation during pregnancy (only for mothers)
- experienced sense of security during pregnancy
- a supportive attitude from staff during pregnancy
- sense of participation during labour/delivery
- participation in decision making during labour/delivery
- sufficient information from staff during labour/delivery
- positive expectation of childbirth
- experiences of childbirth positive
- experiences of security during childbirth

The first version of the PPSS instrument

These items concerned the first postnatal week. There were 38 items in the mother's version and 37 in the father's version. The mother's and the father's version were similar but adjusted for each gender (see further "Data processing and statistical analyses" - content validity)**.** The items were constructed as a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Eight items were formulated "negatively" and were reversed in scoring so that a high score always expressed a high sense of security.

A specific item about experienced postnatal security

Since no other instrument measuring sense of security was found, a single specific item about experienced sense of security the first week after childbirth "I felt secure the first week after childbirth" was asked in addition to the other items. The purpose was to have a specific question for validating the PPSS instrument by asking the parents themselves how secure they felt and then using the answer to compare with the PPSS instrument. This specific item was also scored on a four point Likert scale from one (strongly disagree) to four (strongly agree).

The STAI-trait instrument

In order to measure general anxiety the STAI-trait instrument was used as a background variable (Paper II). The STAI-trait instrument is a well established and validated instrument measuring general anxiety [91]. The STAI-trait instrument consists of 20 items (score 20-80) and is scored on a four point Likert scale from one (almost never) to four (almost always). No standard cut-off score for STAI-trait exists, but mean score for high-school and college students, when the instrument was developed, was between 34 and 41 [91]. In this study the STAI-trait instrument was dichotomised at a cut-off score of 39/40 where $\leq$ 39 was interpreted to be low/normal and $\geq$ 40 a high level of general anxiety, according to Kvaal et al. [94].

Paper III and IV

The data was collected with both focus group and individual interviews. Seven interviews concerning the first postnatal week with 14 mothers (Paper III) and eight interviews with 13 fathers (Paper IV) were carried out. All interviews were conducted between two and 11 weeks after childbirth. Three of the interviews for both genders were focus group interviews and the rest were individual interviews. The respondents were recruited at Preparation for Parenthood classes, one antenatal clinic and from the postnatal wards. At recruitment, presumptive participants were given verbal and written information and were asked for permission to be contacted by telephone two to three weeks after childbirth. The focus groups interviews had duration of 90 to 120 minutes and the individual interviews took between 30 and 60 minutes. The investigators (EP) and (AKD) conducted three of the focus group interviews together (focus group one and three with the mothers and focus group one with the fathers). The rest of the interviews were performed by EP. According to the narrative interview method each interview started with an open question *"Please tell me what was important for your sense of security during the first postnatal week"* and the respondents were asked to speak freely. Every interview was audio tape- recorded and transcribed verbatim.

Data processing and analyses

Paper I

First in the developmental process, before data collection, ***content validity*** including construction of the items and face validity according to Streiner and Norman [95] took place. Content validity indicates whether the items in the instrument are representative and reflect the relevant areas and that the scale measures what it was intend to do [95, 96]. Items were constructed and related to each category and subcategory from the qualitative interview study [6] and the literature review. This resulted in the first version of the PPSS instrument. The mother's and the father's version were similar but adjusted for each gender. In this first step, the PPSS instrument consisted of 37 items in the mother's, and 36 in the father's version, all items concerning the first postnatal week.

Secondly *face validity of the content* was performed by seven midwives, four of them with experience of postnatal care and one of instrument development. The midwives returned the instrument with their written comments. The instrument was also scrutinized during a seminar with a research group. Furthermore, a mother and father with a newborn baby completed the instrument separately. The face validity process resulted in adjustments among the background questions, linguistic adjustments and one new item 'I felt emotional and moved'.

Construct validity, the instrument's conformity to theoretical perspectives was performed with explorative factor analysis, using principal component analysis (PCA) with Varimax rotation. This is a method for identifying clusters of related items on a scale [96]. When developing an instrument, one purpose with explorative factor analysis, is also to reduce the number of items to reveal clear factors [95]. Limitation value for factor analysis was chosen to be Eigenvalue >1 and each factor loading above 0.40 was retained [95, 97]. Descriptive statistics as frequencies and cross tabulations, as well as correlation tests, were used before the factor analysis, as well as a complement, in order to strengthen the analysis (Appendix I and II). The factors were interpreted to be dimensions of postnatal sense of security and that is the reason why the factors are mentioned as dimensions in the results.

Concurrent validity measures the relationship between scores on an instrument and some external criterion measured at the same time [96]. In order to measure how well the PPSS instrument correlates with the parents' own perspective, the single specific item about experienced security the first postnatal week was used as external criterion. The specific security item was dichotomized before analysis (1+2+3 vs. 4) where 1 to 3 represent different degrees of insecurity and 4 represents "total" security. An instrument is valid if its scores correspond strongly with scores in the criterion. Spearman's correlation coefficient was used to examine the relationship. Correlation coefficients of 0.1-0.3 are considered to indicate a weak relationship, 0.3-0.5 a moderate relationship and >0.5 a strong relationship [97].

The reliability is a measure of the proportion of the variability in scores, which is due to true differences between individuals and is expressed as a number between 0 (no reliability) and 1 (perfect reliability) [95, p. 6]. One way of measuring reliability is to determine the instruments internal consistency as an expression of accuracy, where the instruments subparts measure the same characteristics [96]. The concept behind internal consistency is that each item would be correlated with scores on all other items [95]. ***Internal consistency reliability*** of the instrument, for both mothers and fathers, was tested with the Cronbach's coefficient alpha [95, 96, 98]. According to Streiner and Norman [95] Cronbach's coefficient alpha, in an established instrument, should be between 0.70 and 0.90 and the coefficient is an important indicator of an instrument's quality.

Paper II

The final PPSS instrument, after validity and reliability tests (Paper I), was used in Paper II.

Raw index scores (both for the dimensions and total score), were linearly transformed to give a range of 0-100. The purpose for this was to be able to compare mothers and fathers. Median values and inter quartile range (IQR) were calculated for the transformed PPSS instrument. Missing values for separate items ranged between 1 and 12 in the mother's version, and between 4 and 12 in the father's version of the instrument. For comparison regarding PPSS-score between first time and experienced parents, the non-parametric Mann-Whitney U-test (ordinal data) was used. To evaluate the importance of the dimensions and by identifying associations between the different dimensions in the PPSS instrument and the item about experienced security the first postnatal week, multiple logistic regression analysis (backward, likelihood ratio) [96, 99] was performed. To determine associations between the PPSS and the different background variables including the STAI-trait instrument, multiple linear regression analysis (stepwise) [96, 99] was carried out. The background variables about pregnancy and childbirth were asked as four point items (strongly disagree to strongly agree) but were dichotomised before analysis (1+2 vs. 3+4).

Paper III and IV

The transcribed texts were analysed using qualitative content text analysis as described by Burnard [100, 101]. Everything said in the interviews which related to the aim of the study was worked into a coherent text. Initially each interview was read thoroughly and notes about the character of the text were made. Memos were written and the transcripts were read and re-read in order to discern all aspects of the content according to the method of open coding. General themes were then sought to immerse the researchers in the data. Transcripts were re-read several times in order to describe all aspects of the content and the texts were divided into codes, sub-categories and categories. Initial coding resulted in several sub-categories which later on were "collapsed together" [100] to reduce the number of categories (Paper III and IV) and in Paper IV, one main category. Quotations from the transcribed text were chosen for each category. Description of "the process of categorization" is described in detail in the respective papers (III-IV).

Paper I-IV

A comprehensive understanding based on reflection, concerning important dimensions and factors influencing Parents' Postnatal Sense of Security, is presented at the end of the result.

ETHICAL CONSIDERATIONS

The thesis was planned and implemented in compliance with the ethical principles of the Declaration of Helsinki [102] and usual ethical principles used in clinical research [103]. Permission to undertake the studies was obtained from the managers responsible of the departments at the hospitals involved, and the Research Ethics Committee at the Medical Faculty, Lund University, Sweden (LU-235-03; 607/2007).

All participants were assured of confidentiality. The principles of autonomy and beneficence were met by the freedom to take part, by the choice of not returning the questionnaire or returning it blank (Paper I and II) and information about that they were fully entitled to withdraw their participation at any time (Paper III and IV). It was possible that the items in the questionnaire or the topics discussed in the interviews could arouse negative feelings. Contact information was given in the questionnaire and the respondents were asked to ring or write if any questions or thoughts arose (Paper I and II). In the interview studies (Paper III and IV) presumptive participants were given oral and written information by the researcher (EP) and signed consent for participation was sought at recruitment. None of the researchers were currently involved in the care process. Transcripts of the discussions were marked with a number and thus only the researchers/moderators knew the identity of the participants. They could therefore be assured of confidentiality. The principle of justice was strengthened by a gender perspective where both mothers and fathers were given equal opportunities to participate and the results can contribute to benefit other parents.

RESULTS

Paper I

Development of the PPSS instrument

Construct validity
Construct validity; factor analysis and principal component analysis (PCA) (Paper I) revealed the following dimensions with Eigenvalue above 1.0.

The mother's version of the PPSS instrument (explaining 66.8% of total variance) a sense of the midwife's empowering behaviour (6 items), a sense of general wellbeing (5 items), a sense of affinity within the family (4 items) and a sense that breast feeding was manageable (3 items). The mother's version was reduced from 38 to 18 items which gave an index score of 18-72. The father's version of the PPSS instrument (explaining 69.0% of total variance) a sense of the midwife's empowering behaviour (5 items), a sense of the mother's general wellbeing including breast feeding (3 items), a sense of general wellbeing (3 items) and a sense of affinity within in the family (2 items). The father's version was reduced from 37 to 13 items which gave an index score of 13-52.

Three of the dimensions were the same; a sense of the midwife's empowering behaviour, a sense of affinity within the family and a sense of general wellbeing. For the mothers, the fourth dimension was related to a sense that breast feeding was manageable and support in the breast feeding situation. For the fathers the fourth dimension was related to a sense of the mother's general wellbeing and also included breast feeding. The item, "enough support when breast feeding the first week after childbirth", in the mother's version, loaded in two dimensions. The decision was taken, to have this item in the breast feeding dimension, based on the researchers (EP) clinical experience.

Item reduction, the mother's version of the PPSS instrument (Appendix I)
The reasons for reducing the number of items were; for 6 items, that they were relevant for less than half of the number of mothers (items about siblings, domiciliary visits, breast feeding clinic and neonatal care) and for 3 items that they were judged to be overall items. Three items were excluded because they affected most of the mothers in the same way and for that reason the items might not differentiate the mothers' experience (the baby was healthy, I felt psychological well and I felt that the baby's father felt well). One item seemed to be interpreted either as a positive or a negative feeling (I felt emotional and moved) and did not relate which was also strengthened by the descriptive statistics. Two items had a high correlation level (0.70) and therefore one (I participated in baby-care at hospital) was excluded. Factor analysis, in seven steps, was done with the remaining 25 items (step 5-11). Due to empirical reasons the breast feeding support item was re-included, which also increased Cronbach's coefficient alpha. To further increase Cronbach's coefficient alpha, another item was

excluded (my husband participated in childcare at hospital). The remaining 18 items were divided into four logical dimensions.

Item reduction, the father's version of the PPSS instrument (Appendix II)
The items that were relevant for less than half of the fathers were the same as those that were relevant for less than half of the mothers. Three items were also estimated to be overall items. These were the same as for the mothers. The item "the baby was healthy" was excluded because 96% of the babies were healthy and did not differentiate the fathers' experience. One item seemed to have been misunderstood (I was seen) and one had been interpreted either positive or negative (I felt emotional and moved) which were strengthened by descriptive statistics as cross tabulations and frequencies. Two items had high correlation (0.77) with each other and therefore one was excluded (I participated in hospital care). Factor analysis was done with the remaining 23 items. After three analyses, 17 items divided into five different dimensions, remained. Reliability testing of the five dimensions was done and due to low figures another two items were excluded (I could sleep and rest and I managed the practical things at home). The remaining 15 items were also divided into five dimensions. The last dimension contained two items which had no empirical connection to each other and were therefore excluded (I got emotional support from my partner and the staff were available). The remaining 13 items were separated into four logical dimensions.

Concurrent validity between the PPSS instrument and the single specific item about experienced security
When concurrent validity was tested between the PPSS instrument and the specific item about experienced postnatal security, a significant strong correlation was shown for both mothers (R_2=0.719) 0.72 and fathers (R_2=0.621) 0.62 (Figure 2 and 3).

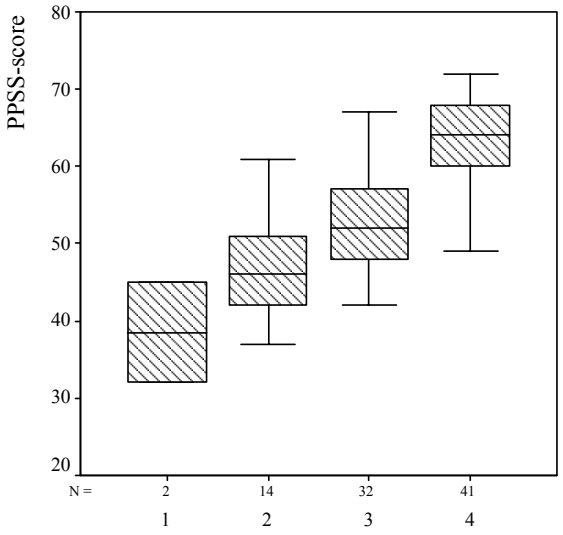


Figure 2. Relation (R_s=0.719, p<0.001) between the PPSS-score, the mother's version and the item "I felt secure the first postnatal week".

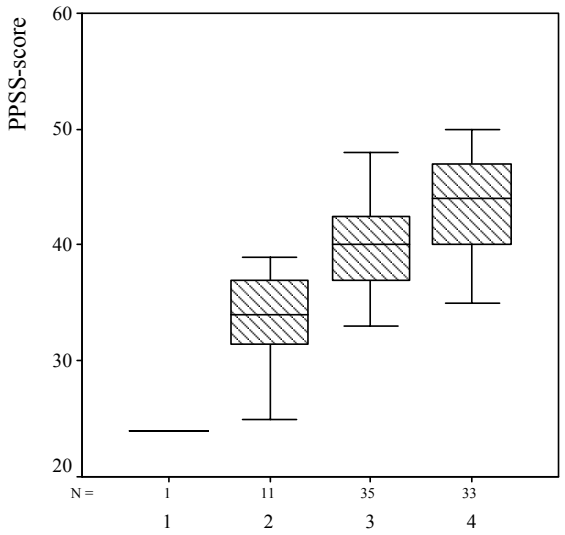


Figure 3. Relation (R_s=0.621, p<0.001) between the PPSS-score, the father's version and the item "I felt secure the first postnatal week".

Internal consistency reliability
For the mother's version of the PPSS instrument (18 items), Cronbach's coefficient alpha was 0.88. Cronbach's coefficient alpha for each dimension was as follows; for a sense of the midwife's empowering behaviour 0.89, a sense of general wellbeing 0.85, a sense of affinity within the family 0.83 and a sense that breast feeding was manageable 0.62.

For the father's version (13 items) Cronbach's coefficient alpha was 0.77. Cronbach's coefficient alpha for the dimensions were as follows; for a sense of the midwife's empowering behaviour 0.89, a sense of the mother's general wellbeing including breast feeding 0.68, a sense of own general wellbeing 0.76 and a sense of affinity within in the family 0.62.

Paper II

Background variables and the association with the PPSS

The most important background variable for postnatal sense of security, for both mothers and fathers, was shown to be general level of anxiety, measured by the STAI-trait instrument. If STAI-trait was controlled for, three items in the mothers version and one in the fathers, showed significant importance. Those were, parity for mothers, a sense of participation during pregnancy for both parents and a sense for the mother that the father felt that he had participated in pregnancy. First time mothers felt significantly ($p=0.02$) less postnatal sense of security, according to the PPSS instrument, than experienced mothers did. No significant difference was shown between first time and experienced fathers ($p= 0.11$). Age, educational level, marital status, mode of delivery, discharge time from hospital and country of birth were not significantly associated with postnatal sense of security (PPSS), neither for mothers nor fathers. Neither did a sense of participation in and experience of delivery as well as a sense of security before and during labour show significant association.

Paper III and IV

Mothers' and fathers' sense of security

In Paper III regarding factors which influenced mothers' sense of security, eight categories scattered into the three themes; *support from staff, support from family* and *capacity and health of the woman and the baby* emerged from the data. Regarding factors which influenced fathers' sense of security one main category; **Participation in the process of childbirth**, including six categories scattered into the three themes *responsibility for the family, wellbeing of the family* and *relationship with staff*, emerged (Paper IV).

Paper III - Mothers' postnatal sense of security

Support from staff

The category ***being met as an individual*** included *being met with a sensitive and flexible attitude* and was experienced by the women as a sign that the staff cared about them and that their individual situation was taken into account. *Experiencing a positive staff attitude to the partner's involvement* at the postnatal ward increased the women's sense of security. There were women who felt that support of their partners, acknowledgement, information, and the general attitude towards them was lacking throughout the whole chain of care. *Being listened to and taken seriously* by staff, whether problems were big or small, gave a sense of security. The women needed to be *met with encouragement and given positive acknowledgement* that all was going well and that they were "doing things right". They also expressed a need for *peace and quiet* after the birth, which the staff could facilitate by showing a *calm demeanour*.

Being given relevant information included being given consistent advice and explanations throughout the whole chain of care, from all categories of staff. The information that was imparted needed to be given in a clear manner so that the women understood the message. One way to increase a sense of security after the birth was to *be offered a postpartum talk* with the midwife present at the delivery.

Being prepared for the time after birth included *being prepared by the staff before birth through being given information about the time after birth.* The women considered that it was the responsibility of the midwives, during antenatal parenthood classes, to inform them about common problems during the early postnatal days. It was of significance that the *partner was acknowledged and included in preparation for parenthood by the health care staff* from the beginning of the pregnancy. This would enable him to support the woman which in turn would give her a greater sense of security. *Being given preventative information before discharge from the hospital* included hints and advice about problems and situations that are common during the first days at home.

Having someone to turn to – knowing who to ask included *having the possibility to ask questions at the hospital and get help if necessary*. Mothers expected to *be given practical and breastfeeding support* by the staff such as food and the possibility to sleep. During the postnatal period at home the women needed to have *someone to call and ask* when questions arose about *their own health or the baby's wellbeing*. It was necessary to know where to get help 24 hours a day. Even those without questions found that having someone to turn to was enough to feel secure.

Support from family

Having partner and/or significant others close at hand included that the partner was given the *opportunity to stay overnight at hospital*. The woman could hand over care of the baby to her partner and thus the *responsibility for the baby was shared*. Another aspect of the partner being close at hand was when the *partner showed interest and involvement*. This gave the woman a feeling of being part of a "twosome". It was also important to *be given practical support*.

Capacity and health of the woman and baby

Mother's and baby's own resources included to *search out knowledge herself.* By *using previous experiences*, multi-parous women found themselves better prepared this time and therefore had a sense of security. *The women themselves* also *included and involved the partner* in the parenting process. When the partner was included, the affinity within the partnership increased and the woman felt a stronger sense of security. Apart from baby being born healthy, the most important factor for the baby's continued well-being was that *breastfeeding was "functioning"*. If breastfeeding was going well, the woman had a sense of security.

Being assured that her own physical health was good was a basic condition for the feeling of security. The woman wanted to *be examined before leaving the hospital* and shortly *after coming home* the women would have liked a *follow-up of their own health* since they experienced huge changes in their bodies.

The women also wanted "***to have a planned follow-up regarding the baby's health after discharge*****"**. Apart from knowing where to turn for help, follow-up of the baby in the form of a *return visit to the hospital, a home visit,* or *a telephone call* soon after discharge was important. The women found it easier to ask questions and to relax at home, experiencing it as a secure environment. Being contacted by telephone gave a sense of security. The main concern was that the follow-up was planned and that someone checked that everything was all right.

Paper IV - Fathers' postnatal sense of security

For fathers a main category, important for sense of security the first week after childbirth, ***Participation in the process of childbirth*** emerged.

Responsibility for the family

The category ***willingness to participate and take responsibility*** included *being involved from the first day of pregnancy* both for the sake of their partners and for themselves. The fathers also wanted to *be prepared before the birth.* The fathers attempted to *take responsibility for the mother and the baby* and also for *practical and economical considerations* in the early postnatal period. Since the baby's wellbeing

and health were central to the fathers' sense of security, for them it was most important to be able to *share responsibility for the baby with the mother*.

Being given the opportunity to take responsibility was essential for the fathers' sense of security. Important requirements for being able to take responsibility were *being given the opportunity to be together with the family at hospital* and *having the possibility to be together with the family when at home* during the first postnatal period.

Wellbeing of the family

The category ***mother's and baby's wellbeing*** included *available medical resources*. The fathers also wanted the mother and baby to be given a medical check-up. *Feeling assured of the mother's and baby's overall wellbeing after childbirth* was of great importance for the fathers' postnatal sense of security. This relationship was evident even after discharge from hospital.

Having someone to turn to – knowing who to ask included *having staff close at hand on the postnatal ward* as well as *having staff to call and ask when at home* if questions arouse. To be allowed to call the hospital 24 hours a day and to be able to contact the child health clinic after discharge gave security. Since the fathers considered breastfeeding to be an important question it was also a matter of security to be able to make contact with the breastfeeding clinic. *Having a social network with close relatives to call and ask* about the mother and the baby was an adjunct to or replacement for health care staff.

Relationship with staff

The fathers spoke about the midwives behavior in the context of how they were met as new parents. They considered it to be obvious that they should be met and seen as an involved and important member of the new family, to the same extent as the mother was.

The category ***being met as an individual*** included for the fathers, *being listened to and taken seriously* in their individual needs and experiences from the beginning of pregnancy and during the whole childbirth process. Fathers' sense of security was affected by the way in which midwives *cared about and gave attention* to them. This was the case before, under and after the birth.

The situation during the first days was in most cases chaotic and the father had a need to constantly be told what was going on. If this information was forthcoming the mother also benefited from it**.** ***Experiencing competent staff*** included *being given relevant and consistent information and explanations.* A *calm demeanour* from staff in combination with their *body language* gave signs about competence. *Being given confirmation* that situations that arose were normal gave security and was experienced as competence. Even though the fathers might be well prepared and well informed it was nevertheless important that staff confirmed that all was as it should be and that the

parents were doing the right things. This allowed the father to concentrate on the child. Also *being given practical services* at hospital in the form of meals being provided and having someone doing the cleaning was important for fathers' sense of security.

Potential new items for the PPSS instrument

Paper III and Paper IV

Paper III and Paper IV have pinpointed specific new items which are important when investigating mothers' and fathers' sense of security during the early postnatal period and which could be amalgamated into the PPSS instrument and subsequently tested (Table 2). These items are closely related to those in the PPSS-instrument (Paper I).

Table 2. New items specifically for mothers' and fathers' postnatal Sense of Security to be further psychometrically evaluated

Mothers	**Fathers**
- a sense of being met as an individual	- being invited to participate early in pregnancy
- the opportunity for the partner to stay overnight at the hospital after the birth	- being able to take responsibility
- staff attitude towards the partner	- being involved during pregnancy
- experiencing peace and quiet	- being prepared during pregnancy
- experiencing staff's calm demeanour	- being given the opportunity to be together with the family in hospital
- being given consistent advice	- being given the opportunity to be together with the family when at home
- being offered a postpartum talk	- being given confirmation about doing things right
- being prepared before the birth for the time after	- feeling secure with available medical resources during delivery
- having someone to call and ask about own health and well-being	- feeling secure with available medical resources after birth
- having someone to call and ask about the baby's health and well-being	- having someone to call and ask (about the mothers and the baby's health and well-being when at home
- being assured that mother's own health was good after birth	- being met as an individual in the meaning of being listened to
- having a planned follow-up regarding baby's health after discharge	- being cared about
	- experiencing a calm demeanour and body language
	- being given confirmation about the normality of the situation

Comprehensive understanding of important dimensions and factors influencing Parents' Postnatal Sense of Security

The results from the four papers in this thesis showed that empowerment from staff, affinity within the family and the health and wellbeing of the family were important dimensions and factors for both parents' sense of postnatal security. An empowering organization was a fundamental base for strengthening this (Figure 4).

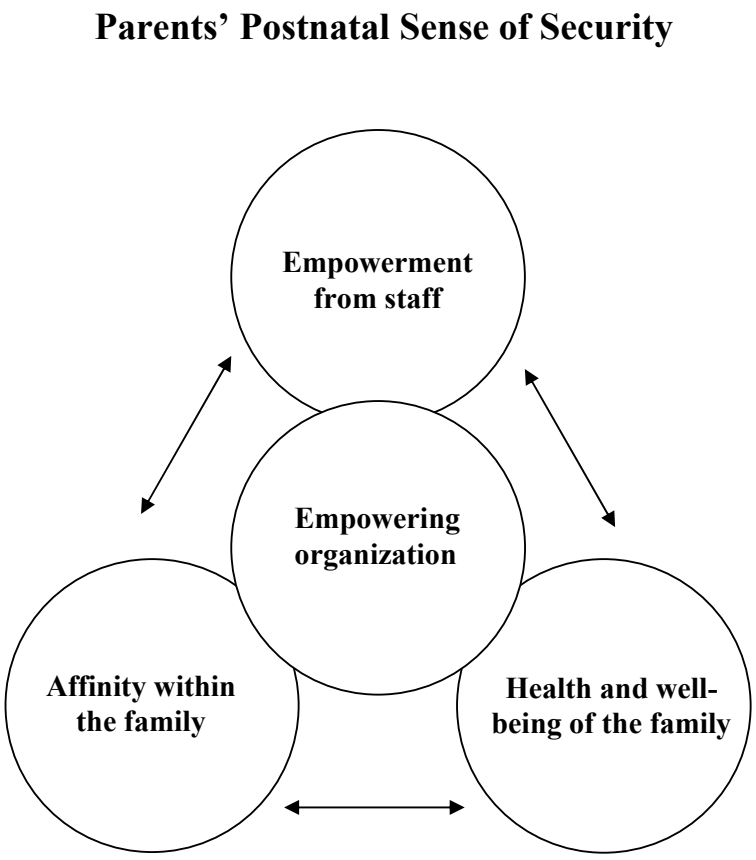


Figure 4. Dimensions and factors of importance for Parents' Postnatal Sense of Security

Empowerment from staff

The midwives/staffs empowering support and behaviour were shown to be an important dimension (Paper I and II) and category (Paper III and IV) for both parents' sense of security in the immediate postnatal period. When the dimension empowering behaviour was related (multiple logistic regression) to the specific item about experienced postnatal security, it was shown to be significantly associated for both mothers ($p<0.001$) and fathers ($p=0.03$) (Paper II). Support and relationships with staff also emerged as important factors for both the mothers' and fathers' experience of sense of security in the qualitative studies (Paper III and IV). Empowering behaviour included encouragement and a positive, enabling and supportive attitude (Paper I –IV). A positive attitude to the partner's involvement and participation during the whole childbirth process were important for the mothers' sense of security (Paper II and III). It was important to include the father already in antenatal care (Paper II – IV). Being met with a sensitive and flexible attitude included that midwives cared about them and that their individual situation was taken into account (Paper III and IV). Items about encouragement and attitudes during the first postnatal week are included in both parents' version of the PPSS instrument (Paper I).

Being listened to and being given attention as an individual

Being met as an individual including a feeling of being listened to, taken seriously and being met by a sensitive and flexible attitude during the whole childbirth process gave a sense of security during the first postnatal week (Paper III and IV). Being met with encouragement by being given confirmation and positive acknowledgement that all was going well and that they were "doing things right" also created a sense of security (Paper III) and allowed the parents to concentrate on their child (Paper IV). By receiving attention for their unique individual needs the parents had a sense of control, which in turn gave a sense of security (Paper III and IV). The category "autonomy/-control" [6] was not considered as a separate important dimension (Paper I), as it did not load as a specific dimension, either for the mothers or the fathers. The remaining autonomy/control item, after factor analysis, 'we participated in decision-making' loaded in the dimension a sense of the midwife's empowering behaviour for both mothers and fathers.

Being given relevant information and experiencing competent staff

Adequate information and practical advice were also important for a sense of security (Paper I-IV). The information should be clear, relevant and consistent (Paper III and IV). Being given explanations were particularly important for first time parents (Paper IV). Being offered a postpartum talk was one way to be given explanations which gave a sense of being given attention to and being cared about (Paper III). There were both mothers and fathers who experienced that they had been given inconsistent and conflicting advice, particularly about breastfeeding. This gave a feeling that the midwives were incompetent, which in turn gave a sense of insecurity. One item about information is included in the PPSS instrument for both mothers and fathers (Paper I).

However this item is formulated as "I have got enough information". A calm demeanour from midwives gave a feeling of competent staff and in that way increased the sense of security for both parents (Paper III and IV). When the parents experienced midwives as calm and competent there were less "tips and tricks" (Paper IV). Breastfeeding support, both at hospital and from the breastfeeding clinic after discharge home, was important for both parents' sense of security (Paper III and IV). The mothers' version of the PPSS instrument also includes one item about breastfeeding support (Paper I).

Being prepared for the time after childbirth

Being prepared by the midwife before birth by being given information about the time after birth was important for both parents (Paper III and IV). It was also important to be given information before discharge from hospital about problems and situations that are common during the first days at home (Paper III). For fathers, preparation for the time after the birth was seen to depend on both his own resources and on the midwife's attitude to his participation (Paper IV). For the mothers it was of significance that the father was acknowledged and included in preparation for parenthood by the midwives, from the beginning of pregnancy (Paper III). Both mothers and fathers considered that it was the responsibility of the midwives, during antenatal parenthood classes, to inform the parents about common problems during the early postnatal days (Paper III and IV). Especially first-time parents could not be expected to know what questions to ask (Paper III) and the fathers expressed that they in fact had more questions after the birth than before (Paper IV). The parenthood classes had not included enough information about the time after birth. There had been too much focus on the birth itself (Paper III and IV). There were fathers that had attended a special lecture for fathers-to-be which focused on the time after birth and on the father's perspective and this had provided security for the time post-birth (Paper IV).

Affinity within the family

Participation during pregnancy

For both parents a sense of the father's participation during pregnancy was important for a sense of postnatal security (Paper II-IV). Used as background variables related to sense of security measured by the PPSS instrument (both the mother's and the father's version) the item about the father's participation during pregnancy showed significant importance (p=0,002 and p=0.02, respectively) (Paper II). The mothers wanted to include and involve the father in the parenting process. When the father was included, the affinity within the partnership increased and the woman felt a strong sense of security (Paper III). The fathers wanted to participate, be involved and to take responsibility from the first day in pregnancy (Paper IV). They wanted what was best for the mother-to-be and for the child and they wished to take their responsibility by showing their interest and being a participant (Paper III and IV). By taking time to participate they showed their interest already during the antenatal period. If the father-to-be showed interest and involvement this gave the woman a feeling of being part of a

"twosome" (Paper III). His participation gave impart security to the mother and thus he himself would feel secure (Paper III and IV). Participation in antenatal visits meant that the fathers had the possibility to get direct answers to their own questions which increased feelings of security after the birth. They felt that the more they participated; their prospects of good contact with the child later on would be better (Paper IV).

Participation and relationship after childbirth

Items about relationships within the family during the first postnatal week loaded in the dimension affinity within the family (Paper I). It was a clear dimension for both mothers and fathers. However, when related (multiple logistic regression) to the specific item about experienced postnatal security (Paper II) the dimension was not significantly associated either for the mothers ($p=0.85$) or the fathers ($p=0.88$). When testing for differences between first time parents and experienced parents, the result was shown to be the same.

Paper III and IV showed that the father's participation at hospital and at home were of great importance for both parents' sense of security after childbirth. The mother wanted to have the father close and this was in turn dependent on his opportunity to stay overnight at hospital and his possibility to take parental leave the first postnatal period (Paper III and IV). The fathers attempted to take responsibility for the mother and their baby and also for practical and economical considerations in the early postnatal period. They felt themselves to be secure if they could take care of both the mother and the child. The fathers wanted to have as much contact with the baby as the mothers had, from the very start, so that the child would also bond with him (Paper IV). The father could share responsibility for the baby by helping the woman to "keep watch". Practical support at home could be given by managing household duties and taking care of siblings (Paper III and IV). Factor analysis (Paper I) showed that, to support each other, to be together and to share responsibility during the first postnatal week, were important for both parents and items about participation in general, as well as practical and emotional support are included in both mother's and father's version of the PPSS instrument (Paper I).

Health and wellbeing of the family

An overall feeling of wellbeing for both parents also included the fact that the baby was healthy (Paper I – IV). When the dimensions were related (multiple logistic regression) to the specific item about experienced postnatal security, the mother's own general wellbeing ($p<0.001$), a sense of the mother's wellbeing for the father's ($p=0.002$) and the father's own general wellbeing ($p=0.002$) were significantly associated with the item about experienced security (Paper II). The dimension about the parents' own wellbeing consisted of items about tension, depression and anxiety (Paper I and II).

Apart from baby being born healthy, the most important factor for the baby's continued well-being was that breastfeeding was "functioning" (Paper III and IV). In the mother's version of the PPSS instrument, one dimension was about her own wellbeing and one was about breast feeding including tiredness (Paper I). For the fathers, the dimension about mother's wellbeing included manageable breast feeding and tiredness (Paper I and II). The father's wellbeing was dependent on both the mother's and the baby's wellbeing (Paper I, III and IV). Both the mother's and the father's version of the PPSS instrument includes an item about manageable breastfeeding (Paper I). However the breast feeding dimension for the mothers was not shown to be significantly associated ($p=0.37$) with the item about experienced sense of security (Paper II). Particularly the fathers' security during the first postnatal week was initiated during the time on the delivery ward. If all went well with the birth, a sense of security followed on to the week after (Paper IV). Having a social network with close relatives to call and ask about the mother's and the baby's health was an adjunct to or replacement for health care staff (Paper III and IV).

Empowering organization

Being given the opportunity to take and to share responsibility

For the fathers, being given the opportunity to be together with the family at hospital 24 hours a day was one of the most important factors for both mothers' and fathers' postnatal sense of security (Paper III and IV). Care services which did not give the father the opportunity to be with the family 24 hours a day were considered as old-fashioned and this could motivate the couple to choose another hospital for the birth (Paper IV). For the father, to stay overnight was an important requirement for being able to take responsibility and to share responsibility with the mother (Paper IV). If the father was given the opportunity to stay overnight at hospital the mother could hand over care of the baby to him and thus the responsibility for the baby was shared. Mothers, whose partners were not allowed to stay overnight, expressed that this was the main reason for a feeling of insecurity and they experienced this as a negative situation. The women discussed whether this had occurred because of shortage of beds or because of routine (Paper III). Having the possibility for the family to be together at home during the first postnatal period was important for both parents sense of security and that was enhanced by the fathers' possibility for paternity leave (Paper III and IV).

Having someone to turn to – knowing who to ask

That staff was available around the clock both at hospital and could be contacted from home was necessary for a sense of security (Paper I, III and IV). Having the possibility to ask questions at the hospital, whenever questions arouse, and to get help if necessary was experienced as essential (Paper III and IV). Those who stayed on the family ward, without night-time staff, expressed that at the same time as they were left in peace they also had the possibility to contact staff in case they needed to ask something (Paper III). During the postnatal period at home it was also important to have someone to call and ask when questions arose. To be allowed to call to the

hospital 24 hours a day and to be able to contact the child health clinic after discharge gave security. Since breastfeeding was considered important it was also a matter of security to be able to make contact with the breastfeeding clinic. Even those without questions found that having someone to turn to was enough to feel secure (Paper I, III and IV). Availability 24 hours a day is also one of the items which appeared important in the mother's version of the PPSS instrument (Paper I).

Available medical resources and planned follow-ups

The women felt that staff focused only on baby's health after delivery (Paper III). For those having previous traumatic experiences, available medical resources were particularly important for feelings of security (Paper IV). Feeling assured of the mother's and baby's overall wellbeing after childbirth was of great importance for both the mother and father (Paper III and IV). This was evident even after discharge from hospital. The parents wanted medical check-ups in form of examinations before leaving the hospital (Paper III and IV). The mothers also would have liked a follow-up of their own health shortly after coming home, since they experienced huge changes in their bodies (Paper III). Apart from knowing where to turn to for help, a planned follow-up regarding the baby's health after discharge in the form of a return visit to the hospital, a home visit, or a telephone call soon after discharge, was important for both parents sense of security. The main consideration was that the follow-up was planned and that someone checked that everything was all right (Paper III and IV).

DISCUSSION

Methodological aspects

By using "mixed methods" comprehending both qualitative and quantitative approach, a deeper understanding for the area "parents' postnatal sense of security" can be detected and highlighted. In this form of method triangulation the researchers strive to distinguish true information [96, p. 333]. A broader understanding of the issue occurs when different methods are used. The findings in each respective Paper strengthen and validate each other and also the study [6] and the literature review which were used as theoretical standpoint.

Paper I and II

Four aspects of validity will be discussed; validity of the PPSS instrument, statistical conclusion validity, internal validity and external validity. The results in Paper I refer to the measurement variable and will therefore, in this thesis, be discussed as a methodological aspect.

Validity of the PPSS instrument

When developing a new instrument, both reliability and validity are important criteria for assessing the quality [96]. A four-point Likert scale was chosen as an answering scale in the PPSS instrument as the STAI-trait instrument [91], which was sent out at the same time, had a four-point Likert scale. Probably it is easier for respondents to fill in a questionnaire if all items have the same scale (Paper I).

Validity is the degree to which an instrument measures what it is supposed to, and in respect to developing a new instrument, an accepted way includes content validity, face validity, construct validity and concurrent validity [96]. The different forms of validity tests were done as steps to ensure that the PPSS instrument really measured postnatal sense of security and not other concepts. It is also a constructive method but validation is a never ending process and the PPSS instrument will be further validated in future research (Paper I).

Content validity

In Paper I, content validity was supported by the fact that items were based both on a qualitative interview study [6] and a literature review. One of the researchers had extensive first-hand knowledge which also influenced the construction of the items. The qualitative interview study [6] was carried out in a context with parents who had chosen to leave hospital early after childbirth. This might have influenced the dimensions in the PPSS instrument but probably the same areas are important irrespective of whether the parents perceive them positive or negative (Paper I).

Face validity

Face validity, by experts, refers to whether the instrument appears to be measuring the appropriate construct [96]. The construction of the items was strengthening by face validity which included seven expert midwives, a research seminar group and a couple with a new-born baby. All of them strengthened the relevance of the original items. The face validity process resulted in adjustments of the background questions, linguistic adjustments and one new item. This resulted in a total of 38 items for the mothers and 37 items for the fathers. However it can bee a weakness that the instrument has not been more thoroughly tested concerning the "readiness/clarity of words". To be seen and to have control were marked as a very important positive factor in the qualitative interview study, though these items were judged to have been misunderstood by many parents (Appendix I and II). One explanation could be that "to be seen" and "to have control" in respect to different experiences, can be regarded as positive or negative (Paper I).

Construct validity

Construct validity includes both logical and empirical procedures [96]. "A sense of postnatal security" for both parents is an abstract and unknown concept. According to Polit and Beck [96] the more abstract a concept is, the more difficult it is to establish the construct validity. Factor analysis is a method that should be applied every time an instrument is used. Explorative factor analysis allows interpretation relevant to the researcher's empirical experiences [96]. As a result, the researchers can influence the findings, which can be both strength and a weakness. In Paper I, the method seemed to be adequate, which was supported by the construction of the dimensions, which were divided logically with satisfactory explained variance. Another approach to construct validation is the known-groups technique [96]. The results showed that first-time mothers experienced less postnatal sense of security, which was expected, however first-time fathers did not, which was unexpected (Paper II). The dimension "a sense of affinity within the family" was not a significant dimension for a sense of security, neither for the mothers nor the fathers, which was unexpected (Paper II). This can, due to the known-groups technique, be an indication that particularly this dimension needs further evaluation, which also is in accordance with the lower Cronbach's coefficient alpha (Paper I).

Concurrent validity

Concurrent validity measures the relationship between scores on an instrument and some external criterion [96], at the same time. The correlation between the specific item about experienced security and the general score in the PPSS instrument, showed significant strong correlation (Spearman's correlation coefficient) for both mothers (R_2=0.719) and fathers (R_2=0.621) (Figure 1 and 2). This indicates that the PPSS instrument is a valid instrument [97]. Usually concurrent validity is tested with another established tool [95], but no other instrument measuring a sense of security, the first postnatal week, was found. If the PPSS instrument had been sent out one week postpartum, it might have been possible to use the STAI-state instrument [91] which measures anxiety "just now", as degree of anxiety and possibly could be compared with degree of security, in a given situation (Paper I).

Internal consistency reliability

The internal consistency reliability, the degree to which the subparts of an instrument are all measuring the same attribute or dimensions [96, p. 502], as measured by Cronbach's coefficient alpha [98] for the PPSS instrument is, in the mother's version, 0.88 and, in the father's version, 0.77, which strengthens the result of the factor analysis. Cronbach's coefficient alpha, for the different dimensions in the PPSS instrument were, for the mother, 0.89, 0.85, 0.83 and 0.62 and, for the father, 0.89, 0.68, 0.76 and 0.62. These results seem to be acceptable, when developing a new instrument [95] but indicate the importance of further development, particularly of the dimension 'a sense of manageable breast feeding' in the mother's version and the dimension "a sense of affinity within the family" in both parents' version of the instrument. One explanation for the relative lower Cronbach's coefficient alpha, in the breast feeding dimension, is that this item loaded in two dimensions, which can lead to a lower Cronbach's coefficient alpha. The lowest alpha for the father's instrument was in the dimension "a sense of affinity within the family" which can be explained by the fact that this dimension only contains two items.

Statistical conclusion validity

Statistical conclusion validity demonstrates if a true relationship exists between dependent and independent variables [96]. Two types of error of measurement can exist, type 1 error where true correlation is rejected and type 2 error where statistical tests show significant correlations which do not exist [96]. As discussed before, the construct validity of the measurement (the PPSS instrument) also influences statistical conclusion validity, whereas a study will not be better than the measurement used. In this thesis (Paper I and II), where the sample size could have been larger, and involved a new instrument, the statistical conclusion validity can be discussed. For example the results (Paper II) that "a sense of affinity within the family" did not correlate significantly to the specific item about experienced security, for any of the parents, could be a type 1 error result. When evaluating the importance of background variables for parents postnatal sense of security (the PPSS), statistical conclusion validity is dependent on which variables are used. In order to avoid the bias that the differences were only dependent on general anxiety, which we can not influence, the STAI-trait instrument [91] was used as a background variable. General anxiety is, in this thesis, seen as basic security/insecurity described by Andersson [8]. The STAI-trait instrument was according to Kvaal et al. [94] dichotomised at a cut-off score of 39/40 where $\leq$39 was interpreted to be low/normal and $\geq$40 a high level of general anxiety. As no official cut-off score exists perhaps this cut-off was not the optimal choice. The background variables concerning pregnancy and childbirth were based on a literature review. Other background variables, as for example if the pregnancy was planned or not, could also have influenced the result.

Internal validity

Internal validity, in quantitative studies, refers to the degree in which the independent variable is truly influencing the dependent variable [96]. Different threats for internal

validity exist. In this thesis (Paper I and II) selection threat, by sample biases, can be discussed. However, background characteristics (Paper I and II) were similar to a Swedish cohort study [104] which indicated the sample as representative for the mothers. For the fathers, no background characteristics for comparison were found.

External validity

External validity is the generalizability and transferability of research findings [96]. The analysable response rate was 71% for mothers and 63% for fathers (Paper I and II). The first draft of the instrument (Paper I), before data analysis, was sent out to the mother and father separately, eight weeks after childbirth. The reason for this was practical as access to the respondents' addresses was not available earlier. The items concerning the first week after childbirth were filled in retrospectively. This might have influenced the results, as the parents may have forgotten some aspects (Paper I and II). However, Simkin [105] has shown that women's memories, several years after childbirth are generally accurate. If the instrument had been distributed one week postpartum it might have increased the response rate, which is important to take in consideration when using the PPSS instrument in the future. It is also conceivable that some parents who have had special difficulties, with themselves, their relationship, the child or are single parents, did not answer the questionnaire. The study design (Paper I and II) did not allow analysis of the drop-outs, which is a limitation. In respect to known address, the questionnaires were sent to the mother's address which can imply that some fathers, not cohabitating with the mother, have not received the questionnaire. The items seemed to be adequate, but the distributed questionnaire, before data analysis, contained far more items (38 and 37 respectively) than the final PPSS instrument (18 and 13 respectively). This can be an explanation for the missing values (Paper I and II). In a future study, using the PPSS instrument, the response rate will hopefully increase as a result of the reduced number of items.

Paper III and IV

Trustworthiness

The method of qualitative content text analysis [100, 101] was felt to serve the aim of the studies well, since we wished to further elucidate a sense of security. According to "truth value" of data in qualitative research, mentioned as trustworthiness, four aspects will be discussed; credibility, transferability, confirmability and dependability [96, 106].

Credibility

The fact that both focus group and individual interviews were carried out has made a broad data collection possible. An advantage of focus group discussion is that the researcher has the possibility to obtain views from several respondents in a short time [107]. On the other hand, a limitation of the method can be that the strongest personality in the group may set the tone for the whole discussion. Despite the intention to have between four and eight respondents in each group, this was not

possible. There were difficulties in arranging times that suited everyone and therefore the groups were small. New parents have many demands on their time. The samples were heterogeneous in relation to educational level, with first time and experienced parents and parents from both rural and urban settings participating. However mothers with lower educational level were under represented (Paper III). A limiting factor to studies of this kind is that it can be assumed that those who agree to partake are already interested in the area under investigation and therefore the material is to some extent self-selected. A limit may be that the participants all had the same ethnic background. Since parents in different cultures may have different perceptions of variables important for a sense of security this aspect of care should also be studied in different cultural contexts [8]. Researcher credibility is one aspect of credibility. In qualitative research, the researchers are the data collecting instrument [96, p. 334]. Pre-understanding can be both positive and negative. In the current studies the researcher (EP) and one of the co-authors (LK) have earlier worked as midwives in a postnatal context. This can be positive as it can lead to a better understanding of the respondent's views but there is a risk that earlier experiences can also influence the analysis. Co-author and supervisor A-KD is also a midwife, though with experience from labour and delivery ward work. The author/co-supervisor BF has specific nursing and methodological knowledge, but is not a midwife. It might be positive that some of the researchers have other frames of reference.

Transferability

Transferability, the extent to which the findings can be transferred to other settings or groups [96, p. 336] can be reached if our results can be seen and tested in the context of different forms of care in postnatal settings. The context in this thesis is from the industrialized western world which must be taken in account when discussing transferability. Transferability was strengthened by the fact that in Paper III and Paper IV the results showed similarity to the dimensions identified in our earlier studies [6, Paper I and II]. However the new items (Paper III and IV) might be amalgamated into the PPSS instrument after being psychometrically evaluated. Applicability can be shown by using the PPSS-instrument in evaluation of postnatal care.

Confirmability

The term confirmability refers to the objectivity or neutrality of the data [96], and to increase this, data collection was done by two of the investigators and quotations were chosen from every interview and every category. All the co-authors were involved in the process, analyzing parts of the data separately and then discussing the analysis together, until consensus was reached. Quotations from the transcribed text were chosen for each category to confirm trustworthiness.

Dependability

The dependability, data stability over time and conditions [96, p. 335] is difficult to predict. However, the results are similar to the earlier studies [6, Paper I and II] where

data were collected in 2003 (6 years earlier) and the interviews were conducted during a one year period.

General discussion

The overall aim with this thesis was to develop and evaluate a specific instrument, measuring both mothers' and fathers' postnatal sense of security and to explore and describe important factors associated with this. The concept Sense of Security was spontaneously mentioned by all the respondents in the study by Persson and Dykes [6] when asked for their experiences of the first postnatal week. It is therefore important both to find, and to be able to measure, factors which can be influenced and supported by health care professionals. By developing and using a specific instrument, measuring positive influencing factors for postnatal sense of security the health care system can be given the possibility to develop postnatal care to be adjusted to parents' specific needs. This in turn could be beneficial to the whole family unit.

Empowerment from midwives is shown to be of greatest importance for both parents' postnatal sense of security (Paper I-IV). The result also shows that affinity within the family (Paper I, III and IV) as well as health and wellbeing (Paper I-IV) are important. An empowering organization strengthens the possibility for staff to empower the affinity and relationships within the family as well as health and wellbeing for the family. The result in this thesis is in agreement with the qualitative study [6] and the literature review but more specified factors have emerged. As also described by Forster et al. [26] both the "basic" and organisational factors were interwoven, which sometimes made it difficult to distinguish between them.

Sense of Security

The definition of security is, in this thesis, close to the description given by Andersson-Segesten [83] as multidimensional including security, safety, confidence, certainty and trust. Sense of security (in Swedish trygghet) is an individual experience which must always be seen in its specific context [8]. She also means that a person's feeling of security depends both on situation related and basic security. The context in this thesis (Paper I-IV) is the first postnatal week which is a period that can be overwhelming for both parents, particularly if it is the first time. Therefore, both the postnatal and antenatal midwives have a very important responsibility to help expectant and new parents to grow as individuals and, in this way, give them a constructive experience. That parents should experience security must be one of the most important goals in postnatal health care. Basic security as described by Andersson [8] is in Paper II interpreted to be a grade of anxiety in general, measured by the STAI-trait instrument [91]. This form of security can be difficult to influence. The PPSS instrument can maybe measure both basic and situation-related security, but the focus must be to evaluate the factors which can be influenced. There is an overall similarity between Swedish research about a sense of security and satisfaction with

postnatal care [1, 3, 5, 39] which might be interpreted that sense of security is essential for being satisfied.

Evaluating postnatal care

It must be possible to evaluate care particularly when care policies are changing [17]. Lots of changes in health care are initiated without evaluating the result. The use of instruments for evaluation is necessary for assuring quality from "patient", staff and economical perspectives.

Studies have shown that many parents experience psychological distress in the immediate postnatal period [75, 76]. Paternal as well as maternal depression and wellbeing affect the child's subsequent wellbeing [11, 22, 78, 79]. This is one reason why it is important to have an instrument capable of measuring these dimensions. Waldenström et al. [5] showed, in their Swedish study, that woman were less satisfied with postnatal care compared to antenatal and intrapartum care. Their results also strengthen the importance of developing standardised forms for evaluating postnatal care. Only three specific instruments for the postnatal period were found [74, 87, 88] and all were developed with the maternal aspect in mind. Therefore it was of special value to illuminate the experiences of the fathers (Paper I, II and IV). To take the fathers perspective into account, as well as the mothers, has also been brought forward as important in a number of studies [13, 15-17, 20, 21, 24, 25, 27].

The PPSS instrument

The results of Paper I, gave two very similar instruments, where the father's version consists of fewer items. The difference between the instruments is dependent on the fact that the mother's version consists of some items about physical wellbeing and the father's items, participation in household chores. This seems to be logical for the situation after childbirth. Index score (raw score) was linearly transformed to give a range of 0-100 (Paper II). The reason was to be able to compare mothers' and fathers' postnatal sense of security. This is however (Paper II) only used when comparing total postnatal sense of security for mothers and fathers as groups. In future research, the transformed score can also be used to compare individual couples.

Three of the dimensions were the same for mothers and fathers (Paper I and II). The fourth dimension was, for the mothers, a sense that breast feeding was manageable while for the fathers the fourth dimension was a sense of the mother's general wellbeing, including breast feeding. It seems natural that the mother's overall well-being and breast feeding, which means that the mother and child are healthy, is important for the father's postnatal sense of security. The item, "enough support when breast feeding the first week after childbirth", in the mother's version, was loading in two dimensions. Due to the researcher's (EP) clinical experience the decision was taken to have this item in the breast feeding dimension but at the same time it seems clear that it is dependent on the postnatal midwife's empowering behaviour, which again supports the importance of the midwife.

Paper III and IV pinpointed more specific new items (Table 2) which are important when investigating parents' sense of security during the early postnatal period and which may be amalgamated into the PPSS instrument and subsequently tested. The new items are in the same dimensions as the result of the study of Persson and Dykes [6] and those in Paper I and II. However, in the PPSS instrument developed in Paper I only items concerning postnatal aspects are included but the results in Paper's II, III and IV also point to the importance of antenatal care. Therefore maybe items about antenatal care and the father's involvement from the beginning of pregnancy should be included.

Empowerment from staff

For both parents sense of security during the first postnatal week their relationship with the midwife was important (Paper I-IV) as well as during pregnancy and birth (Paper II, III and IV). When the dimension "midwives empowering behaviour" (Paper I) was related (multiple logistic regression) to the specific item about experienced postnatal security it showed a significant association for both mothers ($p<0.001$) and fathers ($p=0.034$) (Paper II). Support from and relationships to staff were also one of three themes for both mothers and fathers in the qualitative studies (Paper III and IV). Hunter et al. [46] described the relationship between the midwife and the mother as "the warp threads that hold it all together" (page 136). It can be assumed that the same can be applied to the relationship between the midwife and the father. Hildingsson [39] showed that staff behaviour was an important factor for fathers' experiences of dissatisfaction with postnatal care. The importance of the relationship with the midwife is also shown in other Scandinavian studies [5, 7, 39, 42-44, 47]. A positive empowering relationship described in the different studies corresponds with the items in the dimension 'a sense of midwife's empowering behaviour' (Paper I and II) and the categories about empowering support (Paper III and IV) and were earlier described in the qualitative interview study by Persson and Dykes [6]. A calm atmosphere and a calm demeanour from midwives indicated competence and gave a sense of security (Paper III and IV). Creation of calm is also pinpointed by Huber et al. [108] as associated with satisfaction with maternity care. Mothers expressed a need to receive confirmation as competent mothers by the staff (Paper III) which is also highlighted by Lundgren and Berg [44]. This can be achieved by the staff encouraging the woman and confirming that she is "doing it right" [109], even in small aspects of baby care.

Individualized care and staff attitudes

The midwives ability to listen, to take both parents seriously and to care about them in their unique situation gave a sense of security (Paper III and IV). Individual support also to the partner is important for mothers (Paper III). This was interpreted as genuine empathy. One father emphasized the skill of reflective listening and counselling in line with Fischer [110]. This kind of genuine empathetic listening may induce a sense of security and it is a challenge for all health care staff to gain insight into the importance

of this. Training in communication and counselling for staff and students could be one way to work with staff behaviour with the aim of increasing parents' sense of security.

Staff attitudes to the fathers during the whole chain of maternity care were of great importance for both parents. The importance of staff attitudes to the partner and family-oriented care has been pointed out by many others [1, 15, 26, 27, 39, 52, 82]. That staff should show a sensitive and flexible attitude towards new parents seems an evident observation. However, both mothers and fathers (Paper III and IV) had experiences of being treated in a condescending manner which did not enhance feelings of security. Hildingsson [39] showed that staff behaviour was an important factor for fathers' experiences of dissatisfaction with postnatal care. In the PPSS instrument one item in the dimension "empowering behaviour" both in mothers' and fathers' version is about "positive and supportive attitude. To give all health care professionals insight into the importance of their behaviour is challenging for the health care system. It seems very important to discuss the topic in all educational situations, as well as workplaces.

To be listened to and taken seriously are needs that are probably not specific to the birthing situation but are a basic condition for care and communication as a whole. Items from the category "autonomy/control", shown as important in the qualitative interview study [6], did not load in a specific dimension, neither for the mothers nor the fathers in the PPSS instrument (Paper I). The remaining autonomy/control item, "we participated in decision-making" loaded, after factor analysis, in the dimension "a sense of the midwife's empowering behaviour" for both mothers and fathers (Paper I). This strengthens the significance of midwives (health care professionals) important role to encourage the parents to take control. Andersson [8] meant that the right to autonomy i.e. personal choice, to be able to decide for oneself and to take responsibility are important for a sense of security. Also other studies [7, 51, 81, 82, 111] have reported the importance of control. Perhaps it is not really so important to be able to decide, but to have a feeling of being listened to and to be met with a respectful attitude which, in turn gives, a sense of control.

Information and practical advices should be given in an individualized manner (Paper III and IV). In the PPSS instrument, both parents' version's, there are items about information and practical advice (Paper I). The information and practical advice should be consistent (Paper III and IV). If not it is interpreted as incompetence and gives a sense of insecurity (Paper III and IV). Both mothers and fathers brought up the problem of inconsistent advice particularly regarding breastfeeding. Problems with contradictory advice are well documented [1, 26]. Different advice from staff can be due to lack of competence but also to absence of a common policy.

Several of the mothers expected more practical help from staff to allow them to get some sleep (Paper III), which also has been shown earlier [1, 112]. It seems that an old attitude where the staff always cared for the baby has been replaced by a new attitude where staff seldom cares for the baby. It should be possible for staff to adapt care so that individual needs are met. Yelland et al. [50] discuss how care can focus on the

individual rather than on routine observations. However, omitting routines can imply individual care but can also mean no care at all. It is of great importance to create routines for individual care. Active listening to the woman, and genuine enquiry about what is important for her, has been suggested by others [38, 50].

Affinity within the family

The father's participation during the whole childbirth process was important for both mothers and fathers (Paper I-IV) which also was shown in the study used as a theoretical standpoint [6]. In Paper IV this emerged as a main category. A close relationship between the parents is shown as of consequence in several studies [7, 67, 68, 70]. This can also affect the relationship between the father and child [113]. Fathers are prepared to be part of the whole process and are keen to participate and take responsibility in the immediate postpartum period (Paper IV). Inviting the father to participate gives him the opportunity to take responsibility for the family's wellbeing. Taking responsibility for the family is closely related to protecting the family, which was described by Finnbogardottír et al. [62] and Danerek et al. [113]. Finnbogardottír et al. [62] showed that "feeling of responsibility" and an intention to protect his woman was important for expectant fathers. Other studies point to the importance of seeing the father in his own perspective and not only from a supportive and protective perspective [13, 21, 37]. It seems logical that both these perspectives are equally important and that neither of them should be neglected by health care professionals.

Staff should not only permit but also encourage fathers to share responsibility and to be involved in the whole process. However, fathers' involvement is not always supported by staff (Paper III and IV). Other researchers also support this [13, 15, 21, 37]. An involved father has also positive effects on his attachment to his child [23-25, 71]. Fathers' needs and their intention to take responsibility for the new family have also been demonstrated by St John et al. [114]. Erlandsson et al. [115] showed that the father's responsibility increased when he was given access to the child. Midwives must invite fathers to participate and take responsibility during the whole birth process.

In Paper I, items about relationships within the family during the first postnatal week loaded in the dimension "affinity within the family". However the dimension did not show significant association with the specific item about experienced security (Paper II), for any of the parents. This might be due to the fact that the dimension contains few items or the items were formulated in a wrong way. As earlier discussed, if data fails to confirm a hypothesis, one possibility was that the measuring tool was unreliable, not necessarily that the expected relationship did not exist [96]. Another reason can be that, in the immediate postnatal period, the mother and baby's wellbeing is felt to be the most important. Maybe this dimension will be improved when the new items which emerged in the qualitative studies (Paper III and IV), e.g. "the family's opportunity to be together in hospital" has been amalgamated into the PPSS instrument and been psychometrically evaluated.

Health and wellbeing of the family

For both mothers and fathers it was important "to have someone to turn to and to know who to ask" about baby's and mother's health (Paper III and IV). A need for staff availability during 24 hours, medical resources and planned follow-ups showed that physical health and wellbeing were a basic condition for parents' sense of postnatal security. The PPSS instrument also included items about physically health as well as tiredness, anxiety and depression (Paper I) and the dimension general wellbeing was significantly associated with both parents experienced security in Paper II. Importances of both physical [74] and psychological wellbeing [75, 76] in the postnatal period are well known. The parents focus on the baby's wellbeing and this includes, apart from baby being born healthy, that breastfeeding is "functioning" (Paper III and IV). Support with breastfeeding both at hospital and at home was therefore important for postnatal sense of security (Paper I, III and IV). The importance of breastfeeding for health and wellbeing of mothers and babies have been described earlier [36, 116]. Hendersson et al. [116] described successful breastfeeding as dependent on basic knowledge, accurate information and practical support. Therefore availability and help from the breastfeeding clinic after discharge is of great importance (Paper III and IV). This highlights the importance of not decreasing the number of breastfeeding clinics as society's resources decrease. Own general wellbeing has a focus on psychosocial wellbeing for both parents (Paper I- IV). The mother's wellbeing is important for the father (Paper I, II and IV). This can be interpreted as, if the mother (and child) is well and breast feeding is manageable, it affects the father's own wellbeing in a positive way. A literature review by Genesoni and Tallandini [117] regarding men's psychological transition to fatherhood showed that pregnancy was a period with psychological reorganization of the self. The postnatal period was mainly influenced by environmental factors and is also the most interpersonally and intrapersonally challenging, in terms of coping with the new reality of being a father.

Importance of antenatal care for postnatal sense of security

A sense of participating during pregnancy, for both parents, and the mother's sense that the father felt he was participating, were significantly associated with postnatal sense of security (Paper II) and shown as important categories (Paper III and IV). The sense of participation during the antenatal period can be influenced by the midwives. The empowering support, of the midwife, during pregnancy might incorporate the same components as the empowering behaviour from the postnatal midwife, being listened to, being given attention to as individual, individualized information and being met by a positive and supportive attitude.

Paper's III and IV pinpoint the importance of being prepared by being given information about the time after childbirth. The parents suggested that responsibility for giving information about small, common problems lay with the midwives (Paper III and IV). Particularly first-time parents could not be expected, during

pregnancy, to know what kind of questions they might have after the birth. This may be helped by devoting one class in the preparation for parenthood series to the "time after birth" and having a clear agenda. Fletcher et al. [118] concluded that assessment of fathers by posing questions similar to those to mothers is needed. According to Clement [119] "a listening visit" in pregnancy prevented postnatal depression for mothers. Maybe such a visit can also be valuable for fathers-to-be. Being concerned before birth affected the men so that they were not able to concentrate on preparing themselves for parenthood (Paper IV). The anxiety was mainly about their responsibility for the mother. Pregnancy, rather than the postnatal period, is most stressful for men [120, 121]. According to Buist et al. [122] more attention must be given to the expectant father's antenatal anxiety, which might benefit the whole family. It is of particular importance to give both parents realistic expectations [55, 56, 123, 124]. Both mothers and fathers felt that the antenatal care and particularly "preparation for parenthood classes" did not focus on the time after childbirth or on the father's perspective. The mothers-to-be wanted their partner to be just as well prepared as they themselves were. A need for improvement in preparation for parenthood and the importance of including the partner has been suggested by other researchers [60, 61, 118]. The men who had attended a specific antenatal lecture for fathers were very satisfied by the focus on transition to fatherhood and the postnatal period. This highlights both the importance of preparing for the time after birth and having a gender perspective in antenatal education [121]. The fathers (Paper IV) had, in general, expected more preparation for fatherhood and parenthood in the antenatal classes which has been discussed before [61]. Increasing attention to the fathers may also strengthen the mothers' sense of security in the postnatal period. Fletcher et al. [118] showed that questions directly to the father strengthened his ability to provide support to his wife. To offer both the expectant parents at least one individual "antenatal listening visit" can be one way to support a sense of participation. This can be of particular importance for the expectant father [11, 62] as he usually only visits the antenatal clinic, together with the expectant mother. When both parents visit the antenatal clinic together, the risk is that the expectant father, with respect to not worrying his wife, does not want to ask and talk about his pondering thoughts.

The delivery experience was not shown to be associated with parents' postnatal sense of security (Paper II). This was unexpected as other studies have shown the delivery situation as important for the total childbirth experience [20, 21, 43, 48, 59]. However, fathers in the qualitative study (Paper IV) meant that the birth experiences influenced postnatal sense of security. Of the greatest importance was how they had been met by the midwife attending the delivery. Vehvilainen-Julkunen and Liukkonen [125] concluded that the midwife should also plan for fathers' security and comfort. This again point to staff behaviour. If the antenatal midwife imparts realistic expectations about delivery and parenthood, this might be more important for postnatal sense of security than the delivery.

Empowering Organization

An organization can be dependent on the economical resources but also on the specific caring culture and philosophy.

Both mothers and fathers clearly expressed how vital it was that the father was given the opportunity to stay overnight at the hospital after the birth (Paper III and IV). This gives the parents the possibility to share responsibility. However, in Sweden this is not always feasible. Since the partner's presence is of such importance for security it would seem imperative for postnatal care to be planned to allow all partners to stay with the new family. Ellberg et al. [40] showed that family oriented postnatal care models were both cost-minimizing and increased parents' satisfaction. Planning for future maternity services should include maternity wards where the family can be together 24 hours a day.

Several studies have shown that the father's knowledge and support is important for breast feeding success [34-36]. The sample in Paper II is too small to allow comparison of different care settings related to breast feeding, but if the father is important it is also important to offer care settings where the whole family can be together. This would strengthen the postnatal sense of security, for both parents [6, 7]. One way to support this can be to encourage healthy mothers to leave hospital early after childbirth [6] with the possibility for special support at home [29]. This, in turn, could allow more resources to be available for fathers and siblings to stay at the hospital, when the mother and/or the baby need a longer hospital stay.

Availability, having someone to turn to and knowing who to ask were important for the parents, both at hospital and at home (Paper I, III and IV). However, those parents in, the present study, who had been cared for at the ward which was unstaffed during night time, experienced a sense of security knowing that staff from the nearby postnatal ward were only a phone call away. This can be interpreted as availability, if something unexpected happens, is more important for a sense of security than a need for direct help. Maybe to leave the parents alone in peace shows them that they are capable and in that way increases their self-confidence. Parental self-confidence must be something to strive for. After discharge from hospital there must be an opportunity to know were to call 24 hours a day. Here, the breast feeding clinic was of great importance (Paper III and IV).

An organization with planned follow-ups of both mother and child was necessary for experiencing postnatal sense of security (Paper III and IV). The main focus was on the baby but it was important that even questions about the mother's health could be answered. That follow-ups for mother and baby were planned already at the time of discharge was more important than how the follow-up was carried out. This is in accordance with the study by Löf et al. [84]. Even though the midwife knew that everything was normal, the parents must be assured about this and that they are doing the right things.

Both antenatal care and preparation for parenthood classes must be given resources also to care about the fathers needs such as time for a specific "antenatal visit" and antenatal lectures just for fathers. A need for improvement in preparation for parenthood and the importance of including the partner has been suggested by other researchers [60, 61].

The organization must give midwives and other staff time, possibility and resources to develop themselves, both in specific obstetrical issues and in counselling skills. This will over time be both cost effective and give parents a sense of security. Today society has decreasing resources and there is a risk that continuing educational activities are downsized, which in long time perspective can increase costs. When staff feels a lack of ownership in the process of change, changes in care are not possible [126]. This actualises the importance of discussing research findings and care policy at staff level, in order to allow staff to be part of a policy-making team. Resources must be given to develop strategies for improving care [38]. Training staff in listening can be one way [50].

Gender and cultural aspects

Gender reflections

Midwives must take both parents individual needs into account. Knowledge about the experience of parenthood is usually from the women's perspective [10]. Though it is the mother-to-be who is physically pregnant both parents are equally expectant and new parents and have equal importance for their child [11]. Already from the beginning of pregnancy attention must be given also to the father-to-be [122]. It is important to focus on both parents' experiences separately, in order to strengthen them in an individual perspective as well as parents and family. To strengthening gender equality it is of particularly importance to also include the father in the research. Gender equality might also be strengthened by a father more involved in both childcare and household duties [13]. Therefore family-oriented care, both before and after childbirth, is of great importance. Condon et al. [120] pinpointed that men might have gender-specific risk factors for perinatal psychological distress. The importance of family oriented postnatal care for both parents has been pointed out by many researchers [7, 15, 26, 39, 127]. To strengthen fathers' engagement it seems important for all midwives to meet them individually (Paper III and IV) which also has been described earlier [59, 62]. The fathers in Paper IV experienced economical responsibility. In the situation during child-birth this seems logical particularly, for those who had an economical problematic situation. This can be interpreted that fathers want to protect their family. Economical aspects can also be due to the cultural context.

Care routines which separate the family unit into small parts may violate the natural aspect of family building. Hildingsson et al. [65] showed that fathers who were able to stay in family units were less dissatisfied with postnatal care. A question which may be posed is why fathers still have experiences of not being seen as equally important as the mother (Paper IV) despite the knowledge that this is what the fathers in Sweden

want [15, 65]. Planning for future maternity services should include building maternity wards to accommodate fathers. In Sweden, partners to mothers who are cared for on traditional postnatal wards do not automatically have the opportunity to stay overnight. These women are at risk for complications and it seems paradoxical that the father is excluded, when there is concern for the mother's wellbeing. The opportunity for fathers to take parental leave in conjunction with childbirth is very important for a sense of security for both parents.

Cultural reflections

One limitation which could have influenced the results (Paper I-IV) is that the participating parents were able to speak and understand the Swedish language. The context in this thesis is the western European culture. Therefore the result must be seen in that light. However the dimensions empowering behaviour from midwives, family wellbeing and breastfeeding, might be universal (Paper I). It can also be assumed that fathers request to take responsibility (Paper IV) is universal even if the way it is done varies. If the PPSS instrument had been developed and used in other cultures it can be an assumption that other items and factors had emerged. This will maybe also be the case with immigrant families, who not are fully integrated in the western society. In western cultures the couple is usually the family. "Affinity within the family" might for example includes other family members and the items be formulated differently. The specific health situation for immigrants in Sweden has been shown earlier [128]. The father's possibility to stay at hospital overnight at the postnatal ward which was very important for both mothers and fathers probably reflects the expectations in our society about fathers' equal participation in family life (Paper III and IV). The importance of expectations can be different also in neighbouring countries (experiences by the researcher, EP). In places were it is not usual for fathers to stay overnight the need for this does not become apparent. In western European countries the availability of medical resources may be premised. When talking about postnatal sense of security parents therefore particularly talk about staff behaviour. In developing countries it can be an assumption that more obstetrical and medical factors as e.g. medicine had been emphasized.

CONCLUSIONS AND IMPLICATIONS

The wellbeing of the family, mother's and baby's health are primary considerations for both parents postnatal sense of security.

The newly developed PPSS instrument is a valid and reliable instrument and the only known specific postnatal instrument measuring both Parents' Postnatal Sense of Security and associated important factors. By using a specific instrument, such as the PPSS instrument, health care professionals can be guided to assure and develop care in a positive empowering way.

It was shown that empowerment from midwives and other health care professionals during the childbirth process was important for both parents' postnatal sense of security. Empowering actions from midwives included, for parents, being listened to and being met as individuals. Relevant and consistent information implies that the midwives are competent and gives, in turn, a sense of security. The organization must give midwives and other staff time, possibility and resources to develop their roles and to discuss behaviour. Training in communication and counselling could be one way to work with this. It is also of importance to discuss research findings and care policy at staff level, in order to allow staff to be part of a policy-making team. Routines for individual care must be created.

Affinity within the family is important for both parents' postnatal sense of security. An empowering organization should focus more on the father's role during the childbirth process, including staff attitudes. This will in turn strengthen affinity within the family. Staff should not only permit but also encourage fathers to share responsibility and to be involved in the whole process. Inviting the father to participate gives him the opportunity to take responsibility for the family's wellbeing. Antenatal care and preparation for parenthood classes must prepare for the time after birth and be given resources also to care for the fathers needs such as time for a specific "antenatal visit" and antenatal lectures just for fathers. To offer both the expectant parents at least one individual "antenatal listening visit" can be one way to support a sense of participation. Planning for future maternity services should include building maternity wards where the family can be together 24 hours a day. This will give the fathers the possibility to participate and take responsibility.

A calm environment at the hospital where parents can rest and be together, without stress, empowers them in their parenting role and in that way their self confidence can be strengthened. This also includes a calm demeanour from the staff. Staff availability, having someone to turn to and knowing who to ask when problems arise is a necessity. Planned follow-ups of both mother and baby and a clear organization for where to call if problems arise, are essential for both parents postnatal sense of security.

FUTURE RESEARCH

The PPSS instrument can be used as an outcome variable for evaluating quality in health care; evaluating innovations in care and studies about cost effectiveness in the immediate postnatal period as well as during pregnancy. More specific the following are needed:

- A comparative study, with regard to different care settings and discharge times.
- An intervention study, offering both the expectant parents at least one individual consultation.
- An evaluation study, of clinics offering specific breastfeeding support.
- An evaluation study, where the PPSS instrument is tested internationally.
- In these studies the new items should be used together with the first version of the PPSS instrument and then be evaluated psychometrically.

SUMMARY IN SWEDISH

Svensk sammanfattning

Nyblivna föräldrars känsla av trygghet första veckan efter förlossningen – instrumentutveckling och beskrivning av viktiga faktorer baserat på mödrars och fäders upplevelse

(Parents' Postnatal Sense of Security (PPSS) – developing an instrument and description of important factors based on mothers and fathers experiences)

På senare år har uppmärksamheten inom de industrialiserade länderna mer och mer riktats mot förbättring av vård efter förlossning. Det har visat sig att känsla av trygghet är av betydelse för både mödrars och fäders upplevelse. Hur de nyblivna föräldrarna, både kvinnan och mannen upplever första tiden efter en förlossning är av betydelse för dem både som individer, i parrelationen, deras start som föräldrar samt för barnet. Ökad kunskap om vilka faktorer som är viktiga för trygghet tiden efter förlossning är av stor betydelse för att ge samhället möjlighet att organisera stöd till nyblivna föräldrar samt utnyttja sina resurser på bästa sätt. Med bra stöd från hälsopersonal, till exempel barnmorskan, kan familjen hjälpas att hantera den nya föräldrasituationen på ett positivt sätt. Detta kan i sin tur stärka deras självkänsla vilket är till fördel för hela familjen ur både kort- och långsiktigt perspektiv. Något specifikt instrument som mäter föräldrarnas trygghet efter förlossningen och som också inkluderar den nyblivne fadern har inte hittats i den vetenskapliga litteraturen. Ett instrument kan användas i kvalitetsutveckling och utvärdering av given vård.

Traditionellt har vården efter förlossningen varit mest fokuserad på modern och barnet. Kraven och förväntningarna, i Sverige, dels från samhället dels från båda föräldrarna om faderns delaktighet har dock ökat. I dagens Sverige förväntas båda föräldrarna vara lika delaktiga i familjeliv och barnens vård och genom att beakta faderns upplevelse av trygghet och välbefinnande såväl som moderns kan framförallt faderns roll stärkas. Omhändertagandet efter förlossning skall enligt WHO inte bara vara riktat mot kvinnans och barnets behov utan även mot partnerns och familjens behov. Studier visar att faderns upplevelse under tiden runt förlossning påverkar hans framtida välbefinnande. Studier av tiden efter förlossning, framförallt ur mannens perspektiv, är sällsynta. Det är därför viktigt att inkludera även den nyblivna fadern i forskning kring denna period. Vårdformer som stärker faderns delaktighet kan genom detta stärka hela familjens känsla av trygghet.

Avhandlingen tar sin utgångspunkt i en kvalitativ intervjustudie med nyblivna föräldrar där det visade sig att ”föräldrarnas känsla av trygghet” var av betydelse för deras val att gå hem tidigt efter förlossningen. Känsla av trygghet var beroende av fyra kategorier; känsla av barnmorskans kraftgivande (empowering) förhållningssätt, känsla av samhörighet inom familjen, känsla av självbestämmande/kontroll samt känsla av välbefinnande inkluderande amning. En uppmuntrande och lyssnande attityd, stödjande information från barnmorskan, stöd och praktisk hjälp samt tillgänglighet till stöd efter hemkomst bidrog till att föräldrarna kände sig trygga.

Barnmorskans förhållningssätt föreföll speciellt viktigt för den nyblivne fadern. Känsla av samhörighet innebar; att känna samhörighet inom parrelationen, känsla av delaktighet för fadern, praktiskt stöd från fadern och samhörighet mellan syskonen och det nya barnet. Fäderna påpekade tydligare än de nyblivna mödrarna vikten av samhörighet och delaktighet. Andra studier visar att ju mer den nyblivna fadern är engagerad under förlossning och närmaste tiden efter desto starkare blir hans anknytning till sitt barn. Detta i sin tur kan ha betydelse för barnets och hela familjens välbefinnande.

Det övergripande syftet med avhandlingen var att utveckla och utvärdera ett specifikt instrument som mäter både moderns och faderns känsla av trygghet första veckan efter förlossning samt att utvärdera och beskriva viktiga faktorer som har samband med känslan av trygghet. Specifika syften med delarbetena som ingår i avhandlingen var att utveckla ett specifikt instrument för att bedöma moderns respektive faderns ”känsla av trygghet efter förlossningen” (Studie I), att utvärdera dimensionerna av begreppet ”känsla av trygghet efter förlossningen” samt att utvärdera samband mellan PPSS instrumentet och olika sociodemografiska och situationsrelaterade bakgrundsvariabler (Studie II) samt beskriva och få en djupare förståelse för faktorer som har inflytande på mödrars (Studie III) och fäders (Studie IV) känsla av trygghet första veckan efter förlossning.

I det första delarbetet användes en metodologisk och utvecklande design och ett specifikt frågeformulär konstruerades och testades avseende validitet och reliabilitet, bland annat användes explorativ faktoranalys. Det andra delarbetet är en utvärderingsstudie. Gemensamt för båda studierna var att vart femte fullgångna nyfödda barn (n=160) under en månad valdes ut från fem olika sjukhus i södra Sverige. Urvalet utgjordes slutligen av 113 mödrar (71%) och 99 fäder (63%). Datainsamlingen skedde med hjälp av ett nykonstruerat specifikt frågeformulär som anpassats för modern respektive fadern. Frågorna formulerades som påståenden med Likert-skala och konstruerades med utgångspunkt från kategorierna i den kvalitativa intervjustudien samt en litteraturgenomgång. Moderns version av frågeformuläret innehöll 38 och faderns 37 påståenden angående första veckan efter förlossning. Distribution av frågeformuläret skedde åtta veckor efter förlossningen i form av en postenkät som också innehöll sociodemografiska och situationsrelaterade frågor/påståenden samt ett generiskt instrument som mäter generell oro (STAI-trait). Ett specifikt påstående ingick också i enkäten med en direkt fråga gällande föräldrarnas känsla av trygghet första veckan efter förlossningen. Enkäten skickades separat till modern respektive fadern. I det första delarbetet gjordes explorativ faktoranalys samt Spearmans korrelationstest. Cronbach’s coefficient alpha beräknades för bedömning av intern konsistensreliabilitet. I delarbete två användes ett icke parametriskt test (Mann-Whitney U-test) för jämförande analys, samt stegvis multipel regression och multiple logistisk regression för sambandsanalys. Faktorerna från faktoranalysen benämndes som dimensioner av begreppet ”känsla av trygghet efter förlossningen”. I delarbete III och IV användes en kvalitativ explorativ och beskrivande metod, kvalitativ innehållsanalys enligt Burnard. Fokusgruppsdiskussioner samt individuella intervjuer genomfördes med mödrar (n=14) samt fäder (n= 13), för att fördjupa förståelsen för

vilka faktorer som är av betydelse för föräldrarnas känsla av trygghet första veckan efter förlossningen. Varje intervju eller fokusgruppsdiskussion, startade med en stor öppen fråga *”berätta om vad som var viktigt för din känsla av trygghet första veckan efter förlossningen?”*. Intervjuerna fördjupades därefter med hjälp av följdfrågor. Samtliga delarbeten har godkänts av etisk kommitté.

Resultatet i delarbete I och II, visade att urvalet, avseende de sociodemografiska variablerna, när det gäller mödrarna var jämförbart med en större nationell svensk cohort studie. För fäderna fanns inte något sådant jämförande material. I det första delarbetet, som innebar utveckling av instrumentet, visade den explorativa faktor-analysen i moderns version av instrumentet att följande fyra dimensioner förklarade 66,8 % av den totala variansen; en känsla av barnmorskans kraftgivande (empowering) förhållningssätt, en känsla av eget generellt välbefinnande, en känsla av samhörighet inom familjen och en känsla av att amningen var hanterlig. Faderns version av instrumentet visade också fyra dimensioner vilka förklarade 69,0% av den totala variansen. Tre dimensioner var samma som i moderns version, en känsla av barn-morskans kraftgivande (empowering) förhållningssätt, en känsla av eget generellt välbefinnande, samt en känsla av samhörighet inom familjen. Den fjärde dimensionen var en känsla av moderns generella välbefinnande inklusive amning. Påståendena i moderns version av instrumentet reducerades genom faktoranalysen från 38 till 18 med ett totalt indexvärde mellan 18-72 och i faderns version från 37 till 13 med ett totalt indexvärde mellan 13-52. En stark korrelation mellan totalindex från PPSS instrumentet och det specifika påståendet ”jag kände mig trygg första veckan efter förlossningen” visades både för mödrarna (R_2=0.719) och för fäderna (R_2=0.621). Den tyngsta dimensionen i faktoranalysen var för både modern och fadern en känsla av barnmorskans kraftgivande (empowering) förhållningssätt, (Cronbach´s coefficient alpha 0.89 för båda föräldrarna) (Studie I). I delarbete II korrelerade denna dimension signifikant med det specifika påståendet angående trygghet en vecka efter förlossningen för både mödrarna ($p<0.001$) och fäderna ($p=0.03$). Ett tydligt samband mellan ”känsla av trygghet efter förlossningen” mätt med PPSS instrumentet och bakgrundsvariablerna ”generell oro” (STAI-trait) och ”känsla av delaktighet under graviditeten” för både mödrar och fäder visades. För modern visade också ”paritet” (antal födda barn) samt hennes ”upplevelse av den blivande faderns delaktighet under graviditet” ett signifikant samband med känsla av trygghet. För fadern visade ”antal egna barn” inte något signifikant samband. Resultaten i delarbete III (mödrar) framträdde med tre teman, 28 underkategorier och åtta kategorier. Temana var; *Stöd från personalen, Stöd från familjen* samt *Moderns och barnets egen kapacitet och hälsa*. Dessa teman inkluderade kategorierna; *Personligt bemötande, Erhålla relevant information, Förberedas för tiden efter förlossningen, Ha någon att vända sig till - veta vem man ska fråga, Ha partnern eller närstående inom räckhåll, Moderns och barnets egna resurser, Vara försäkrad om att den egna hälsan är bra* samt *Ha planerad uppföljning efter utskrivning från sjukhuset.* Resultatet från delarbetet med fäderna (Studie IV) visade en något annorlunda bild. En huvudkategori av betydelse för känsla av trygghet växte fram under analysprocessen och benämndes *Delaktighet i barnafödande processen.* Tre teman, 18 underkategorier och sex kategorier framkom. Temana var; *Ansvar för familjen, Familjens välbefinnande* och *Relationen till*

personalen. Dessa teman inkluderade kategorierna; *Vilja att deltaga och att ta ansvar, Ges möjlighet att ta ansvar, Moderns och barnets välbefinnande, Ha någon att vända sig till – veta vem man ska fråga, Bli bemött som individ* samt *Uppleva personalen som kompetent.*

PPSS instrumentet, som mäter viktiga dimensioner av ”känsla av trygghet efter förlossningen”, har god validitet och reliabilitet både i moderns och i faderns version, fortsatt utveckling där ”nya” påstående testas tillsammans med PPSS instrumentet är dock värdefullt. ”Känsla av delaktighet under graviditeten” liksom barnmorskans/-personalens kraftgivande (empowering) förhållningssätt under den första tiden efter förlossning var av stor betydelse för båda föräldrarnas känsla av trygghet efter förlossningen. Båda föräldrarna behövde bli uppmärksammade som individer på ett respektfullt sätt. Informationen skulle vara individuellt avpassad och ändå vara samstämmig. Barnmorskan skulle också underlätta för fadern eller närstående att vara nära sin familj vilket gav honom möjlighet att ta ansvar och vara delaktig. Det var viktigt för fadern att ”bjudas in” i processen av barnafödandet så att han kände sig delaktig redan från början och kunde vara närvarande och ta det ansvar för moderns och barnets välbefinnande som han önskade. Kompetent personal som informerar och bemöter även honom som en individuell person spelar stor roll för hans känsla av trygghet liksom att både modern och barnet får uppföljning. En planerad uppföljning så att föräldrarna vet var de ska vända sig om problem uppstår är viktigt för tryggheten. Möjlighet att kunna vända sig till speciella Amningsmottagningar var speciellt viktigt för båda föräldrarnas trygghet och påverkar också barnets hälsa och välbefinnande.

Slutsatsen i avhandlingen är att ett stödjande bemötande från barnmorskor och annan vårdpersonal, samhörighet och delaktighet inom familjen, hälsa och välbefinnande för modern och barnet är betydelsefullt för känsla av trygghet första veckan efter förlossningen för båda föräldrarna. Detta är beroende av en stödjande organisation där exempelvis fadern har möjlighet att stanna kvar på sjukhuset tillsammans med modern och barnet efter förlossningen. Ett nytt specifikt validerat instrument, PPSS instrumentet, för att mäta ”känsla av trygghet efter förlossningen” utvecklades och testades för både modern och fadern (Studie I och II). Dimensionerna i ”känsla av trygghet efter förlossningen” bekräftades och utvärderades liksom att samband med betydelsefulla bakgrundsvariabler identifierades. Specifika faktorer som framkommit i delarbete III och IV kan vara av betydelse för fortsatt utveckling av PPSS-instrumentets validitet och reliabilitet.

Avhandlingens resultat bidrar till att utveckla framtida vård för att föräldrarna ska kunna uppleva trygghet efter förlossning. PPSS instrumentet kan användas vid utvärdering i samband med kvalitetsmätningar, förändringar inom vården samt i kostnadseffektivitets studier. Konkreta tips på förändringar som gagnar blivande och nyblivna föräldrars känsla av trygghet har framkommit; mer fokus på faderns roll samt förberedelse på tiden efter förlossning bör ges inom mödrahälsovården, fadern bör ges möjlighet till ett enskilt besök hos barnmorskan under graviditeten, fadern måste ges möjlighet att stanna kvar på sjukhuset efter förlossning, planerade uppföljningar av

moder och barn efter hemkomst från sjukhus samt en klar struktur för var föräldrarna kan vända sig med små och stora frågor är av stor betydelse. Amningsmottagningar måste finnas. Eftersom personalens bemötande är så viktigt bör all personal utbildas/-tränas i stödjande kommunikation och samtal till exempelvis ”aktivt lyssnande”. PPSS-instrumentet behöver utvecklas ytterligare och de nya framkomna påståendena kommer att testas psykometriskt i samband med nya studier där instrumentet används.

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