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Journey from Pregnancy to Early Parenthood

*Perceived Needs of Support, Fathers' Involvement,
Depressive Symptoms and Stress*

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Abstract

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Aims: The overall aim was to describe the perceived needs for support and fathers' involvement among expectant parents, and to examine depressive symptoms and parental stress in early parenthood among mothers and fathers.

Methods: Two qualitative studies using focus groups and individual interviews, and three quantitative comparative studies using three questionnaires were conducted.

Results: The expectant parents had different needs and suggestions for health-care improvement. One improvement of these was better involvement of expectant fathers, as fathers were described as the mothers' best means of support and also had needs of their own. The fathers used different strategies to get involved during the pregnancy, but sometimes found it difficult to know what was expected of them. The mothers perceived more depressive symptoms and parental stress than the fathers. The mothers also perceived higher dyadic consensus than the fathers. Parents with depressive symptoms reported lower consensus than those without. There was a negative correlation between dyadic consensus and depressive symptoms in both mothers and fathers. Mothers perceived higher parental stress than fathers in the sub-areas 'Incompetence regarding parenthood', 'Role restriction', 'Spouse relationship problems', and 'Health problems', and overall. In contrast, fathers perceived higher stress than mothers in the sub-area 'Social isolation'. Low education, lack of a role model and poor sense of coherence promoted more stress in mothers in the sub-areas 'Social isolation' and 'Spouse relationship problems', while lack of a role model and low sense of coherence promoted stress in fathers in the sub-area 'Social isolation'.

Conclusions and clinical implications: The expectant parents' needs of support were not consistent with the support offered from health care services. These services need to become more client-centred, for example by offering customized individual support and peer support in groups. Further, they should also meet the needs of expectant fathers which can benefit the whole family. To promote parents' health and family stability, health professionals should consider depressive symptoms and parental stress. They should also take gender norms into account so that parents become prepared for parenthood and get adequate support during early parenthood.

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*The gain is not the having of children;
it is the discovery of love and
how to be loving.*

Polly Berrien Berends

To my wonderful big family

List of Papers

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

- I Widarsson M, Kerstis B, Sundquist K, Engström G, Sarkadi A. (2012). Support needs of expectant mothers and fathers: a qualitative study. *The Journal of Perinatal Education*, 21(1): 36–44.
- II Kerstis B, Engström G, Sundquist K, Widarsson M, Rosenblad A. (2012). The association between perceived relationship discord at childbirth and parental postpartum depressive symptoms: a comparison of mothers and fathers in Sweden. *Uppsala Journal of Medical Sciences*, 117(4): 430–438.
- III Widarsson M, Engström G, Berglund A, Tydén T, Lundberg P. (2014). Parental stress and dyadic consensus in early parenthood among mothers and fathers in Sweden. *Scandinavian Journal of Caring Sciences*, 28(4): 689-699.
- IV Widarsson M, Engström G, Rosenblad A, Kerstis B, Edlund B, Lundberg P. (2013). Parental stress in early parenthood among mothers and fathers in Sweden. *Scandinavian Journal of Caring Sciences*, 27(4): 839–847.
- V Widarsson M, Engström G, Tydén T, Lundberg P, Hammar Marmstål L. ‘Paddling upstream’: fathers’ involvement during pregnancy as described by expectant fathers and mothers. (*Submitted*).

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Abbreviations

ANC	Antenatal Care
CHC	Child Health Centres
DCS	Dyadic Consensus Subscale
EPDS	Edinburgh Postnatal Depression Scale
FGI	Focus Group Interview
NSM	Neuman Systems Model
SOC	Sense of Coherence
SPSQ	Swedish Parenthood Stress Questionnaire
WHO	World Health Organization

Terms and definitions

Client system	Family
Dyadic consensus	An aspect of satisfaction, defined as a functioning intimate relationship between two persons who have chosen to live together on an emotional basis, irrespective of cohabitant or other family situation.
Family	Two or more persons who are linked together by intimate association, resources and values, and consider themselves to be a family.
Family stressor	Any force that has the potential to produce or produces instability within the family system.
Gender equality	Relates to women and men having the same rights, obligations and opportunities within life's important areas.
Parental stress	The aversive psychological reaction to the demands of being a parent.
Parental support	A wide range of activities that parents are offered the opportunity to take part in, which aim to promote children's health and psychosocial development.

Introduction

In recent years, many organizational changes have been made in Swedish health care, generally leading to shorter hospital stays. Hospital stays for women in maternity wards have been shortened by days, and sometimes, in paediatric wards, by weeks. In conjunction with other societal changes, these organizational changes have resulted in the women's partners being included in the care of the mother and child. The involvement of the partner is not just because of these changes, although the partner is essential, but because today, children's and women's clinics require that both mothers and fathers participate. It is greatly challenging for health professionals to give the whole family adequate support.

Becoming a parent is a life-changing ¹ exciting and joyful event for the majority of women and men. For some this starts as soon as the pregnancy is confirmed, and for others, when they hold their newborn child for the first time. This transition to parenthood can include great expectations but also increased worry, stress ^{2,3} and conflicting emotions, such as deep love and commitment but also alienation and loss of control over their own lives ⁴. After childbirth, some parents experience depressive symptoms and parental stress that affect not only themselves, but also their relationship with their partner and child ^{5,6}.

While some parents are well prepared for becoming a parent, others are not ^{7,8}. In Sweden, parenthood and the social context in which parents live have changed from the mother caring for the children to both parents more widely sharing the responsibility for their children and the housework, although mothers still spend more time doing housework than do fathers ^{9,10}. The employment rate in Sweden in 2012 was 82% for mothers and 92% for fathers ¹¹. However, it is still more common for fathers to work full time (74%) than for mothers (42%) ¹¹.

Fathers who engage with their children and share domestic tasks equally with their spouses develop less negative health behaviour and have lower risks for ill health and death ¹². A father's presence and engagement are important for the health of the child and the child's future. Father's engagement is associated with fewer psychological problems in girls and reduces the frequency of behavioural problems in boys ¹³. Fathers' prenatal involvement increases their engagement during the early childhood years and the parenting alliance ¹⁴⁻¹⁶. There is a positive relationship between dyadic quality and high personal well-being in spouses ¹⁷. When parents work together to fulfil their parenting responsibilities, self-efficacy is

influenced more for fathers than for mothers¹⁸. Some parents, especially fathers, lack a role model to guide and mentor them in their parenthood¹⁹⁻²¹. Parenting interventions have mostly focused on mother-child relation rather than on the relation of mothers and fathers as co-parents²²⁻²³.

Parental support

Swedish parental support should contribute to in-depth knowledge of children's needs and rights, further contacts and community promotion, and assist parents in their parental role²⁴. In 2008, the Institute of Public Health was commissioned by the government to develop an official definition of parental support, which took the United Nations Convention on the Rights of the Child as its starting point: 'A wide range of activities, which parents are offered the opportunity to participate in and which aim to promote the health and psychosocial development of children'²⁴ (p. 45).

One of the main aims for public health interventions in Sweden is to support good parenting skills²⁵. Parents are offered different kinds of support from society and receive antenatal care (ANC) and child health care free of charge until the child is 19 years old. Child health care is offered through primary care units, Child Health Centres (CHCs), and in hospital care.

The aim of maternal health care in Sweden is to promote reproductive health for both women and men, implying that maternal health care provides assistance in parenting and support for both parents along with maternal childbirth preparations²⁶. All pregnant women receive ANC through primary health-care maternity units and a few publicly financed, private alternatives. Since public parental education started in 1979 in Sweden, men have been invited to attend ANC and parental education sessions²⁷. In addition to providing high-quality medical care during pregnancy, Swedish ANC aims to promote psychological and physical health through helping and supporting expectant parents in their transition to parenthood. Care is given, for example through individual appointments with midwives, and through group-based parental support led by midwives. In 2013, 72.1% of first-time mothers and 66.5% of their partners participated in parent groups during the pregnancy²⁸. The extent to which experienced mothers and their partners attended such groups is not reported, as many county councils/regions only offer group sessions to first-time parents²⁸.

Despite men often expressing a desire to be prepared before their baby is born, and to participate in the pregnancy, they experience feelings of being excluded from antenatal appointments and classes, and are not mentioned in some of the parenting literature^{7, 29}. Support for pregnant women may have both short- and long-term beneficial mother-child effects³⁰, and partner support is positively associated with maternal and child well-being³¹. Pregnant women with lack of social support have increased risk for

depressive symptoms and babies born with lower birth weight ³². Lack of social support and low partner support for mothers are related to parental stress in mothers ^{31, 33}.

Most parents want to live healthily during pregnancy and early parenthood, and to be role models for their child ³⁴. Even though fathers want to be there for their child, there are sometimes obstacles, such as lack of time, and lack of support by society and social policy ³⁵. Although the parents share the responsibility for their children, mothers are more often the primary caregivers ³⁶ and, consequently, health-care organizations still support mothers more than fathers ³⁴. Compared with mothers, fathers receive lower levels of support ³⁷⁻³⁹, as well as insufficient engagement from ANC and CHC organizations ³⁴. Expectant fathers often fall into a secondary role during pregnancy and puerperium, and feel displaced and set aside by routine in the ANC, which is problematic both for them and for the mother ^{7, 40-42}. In Sweden today, expectant mothers today have higher expectations regarding the involvement of their partner than did mothers 10 years ago ⁴³. Parental support with the primary focus on the child promotes positive development of children and has positive effects on the national economy ²⁴. Both mothers and fathers perceive support for their own needs, but the child's need is still the most important to the health professional, and their support is primarily geared towards mothers ^{7, 34, 44}.

Parental leave in Sweden

Parental insurance was introduced in Sweden in 1974 ⁴⁵. Compared with 21 other high-income countries, Sweden, along with Finland, Norway and Greece, is a leader in terms of generous and gender-equal parental leave policies ⁴⁶. In addition to parental leave, a father (or other parent) of a child is entitled to a temporary parental benefit for 10 days in connection with the birth of the child. This enables the parent to be present at the birth, to get to know the new child and to take care of other children in the family ⁴⁷. To support parents so they can combine work with the care of young children, parents receive a parental benefit for a total of 480 days, until the child turns 12 years old ⁴⁸. For 390 of those days, the compensation is related to the parent's income. Each parent is entitled to half of the total number of parental leave days if they have joint custody of the child. Since 2008, Sweden has emphasized gender equality by including 'the gender equality bonus' for parents ⁴⁸. The parents do not have to be married or living together to receive these benefits. Despite this gender equality policy mothers still use more (75.2%) of the parental leave than do fathers (24.8%) ⁴⁵.

Depressive symptoms and stress in early parenthood

The transition to parenthood includes changes in emotional functioning. Mothers and fathers can perceive depressive symptoms and stress during early parenthood⁴⁹⁻⁵¹. Parental stress is defined as the aversive psychological reaction to the demands of being a parent⁵². To be a parent can be associated with a number of stressors that may be a source of conflict⁵³. There are several studies of parental stress in mothers^{54, 55}, yet studies of parental stress in fathers are scarce^{49, 56}. Depressive symptoms and parental stress are attributed mainly to previous parental psychopathology and only to a minor extent to children's difficulty-fussiness (which includes the baby's fussiness, difficulty, crying and readiness to be soothed)⁵⁷. These emotional changes can lead to negative feelings towards the child, which can, in a family context, have harmful effects on the well-being of the child, the parents and the relationship between the couple^{58, 59}. Parents having depressive symptoms are associated with later problems in their children⁶⁰⁻⁶² and parental stress with child temperament and child difficultness^{56, 63, 64}. Generally, child difficulty-fussiness is a risk factor for increased levels of stress for fathers more than for mothers⁵⁷. Parental stress 2 years after child birth is predicted by the child's temperament, and by parents' personality traits and negative emotions, mainly depression and a lack of support during early pregnancy⁵⁶.

New fathers are at risk of depressive symptoms if reported depression before the child was born, or while the father is living with a partner with postnatal depressive symptoms^{65, 66}. The strongest predictor of paternal depressive symptoms is maternal depression⁶⁷, poor relationship satisfaction⁶⁸, and parental stress⁶⁹. Risk factors for depressive symptoms among mothers are a past history of psychopathology and psychological disturbance during pregnancy, poor marital relationship and low social support, and stressful life events⁷⁰.

Depressive symptoms, parental stress and less dyadic consensus between mothers and fathers are associated with an increased risk of separation 6-8 years after childbirth⁵. Postpartum depression and parental stress contribute to low satisfaction and increased risk of disharmony in partner relationships^{54, 66, 70}. A disharmonious relationship can negatively affect both the parent-child relationship and the well-being of both parents and child^{66, 71, 72}, and can result in couples separating from each other⁵. Mothers report more depressive symptoms than do fathers^{51, 73, 74}. Fathers score higher depressive symptoms in the postpartum period than the antenatal period⁷⁵. Depressive symptoms are more common in fathers with a senior high school educational level than in those with higher education or in those with 9 years of compulsory schooling⁶. In contrast with fathers' depressive symptoms, the pregnancy, rather than the postnatal period, is the most stressful period for mothers¹⁹.

Parents with low levels of involvement in the family report higher stress than do parents with high levels of involvement ⁶³. Some studies found a correlation between low education and stress in mothers and fathers ^{52, 56, 76}, but others have not established this correlation in mothers ⁵⁵. Mothers experience more parental stress, particularly in the area of feeling incompetent, having more role restrictions than fathers, while fathers experience more stress in isolation than do mothers ⁴⁹. Mothers with more frequent visits to social networking sites experience higher parental stress than fathers, while fathers connecting with friends on networking sites experience better parental adjustment than mothers ⁷⁷. Stressed parents tend to remain stressed across the preschool period ⁵⁸. Parents with good health report less parental stress than those with poor health ^{63, 78}.

Theoretical framework

The Neuman systems model

Nursing science's Neuman systems model (NSM), which is based on Selye's stress theory, was applied in this thesis to examine parental stress. The NSM was developed in 1979 as an educational model or holistic framework to organize nursing knowledge, based on systems theory ⁷⁹. In this stress model, the health of a person is considered to be determined by the person's reaction to stress. Stressors in the environment may be intra-, inter- or extra-personal. According to the NSM, health is synonymous with optimal system stability and implies the best possible wellness state at any time. The NSM offers a way of conceptualizing family interactions, although persons are viewed as individual clients or client systems, and as an individual or a family ⁸⁰, where each individual client or group is unique ^{80, 81}. There is no universal definition of the term family. In this thesis, a family is defined as 'two or more persons who are linked together by intimate association, resources, and values, and consider themselves to be a family', in accordance with Bomar ⁸² (p. 9). The client is an open system involved in a dynamic, constant energy exchange between internal and external environments to promote balance and harmony ⁸². The NSM includes the idea that clients continually interact with environmental stress factors, which may cause stress reactions ⁸². A family stressor is defined as 'any force that has the potential to produce instability within the family system' ⁸² (p. 260) and can be intra-, inter- or extra-family system stressors ⁸². The family can be seen as a whole unit and as the central core unit of the community, where society is built ⁸⁰. Different family traditions, psychosocial practices and behaviours affect not only each family but also the entire community ⁸⁰. The model can be used as a general guide, and provide theoretical concepts as a foundation for professionals in nursing, and also be adapted to guide family health promotion through prevention as intervention ⁸⁰.

The client system consists of five interrelated and interacting variables or domains, namely, sociocultural, spiritual, developmental, psychological and physiological ⁷⁹⁻⁸¹ (Figure 1). The basic structure, or central core, of this model includes and represents the energy sources that maintain the family as a unit for the members related to one another.

The model includes three protective lines: Lines of Resistance, Normal Line of Defense and Flexible Line of Defense. The Lines of Resistance includes concepts concerning the family's values, beliefs, interdependence and interrelatedness. The Normal Line of Defense is the standard for the usual stability state for the family. The family system encounters different stressors, named intra-, inter-, and extra-family stressors. Stressors can penetrate the Normal Line of Defense, affecting the client's health, unless countered by the Flexible Line of Defense. The Flexible Line of Defense acts as a buffer system that protects the Normal Line of Defense from environmental stress to maintain the family's normal or stable state ^{80, 81}.

To prevent stressors, the NSM uses prevention at three levels; the primary level of prevention is via health promotion, before a reaction to stressors occur; the secondary level of prevention is by treatment of symptoms following a reaction to stressors; and the tertiary level of prevention is by maintaining optimal wellness following treatment ⁸⁰.

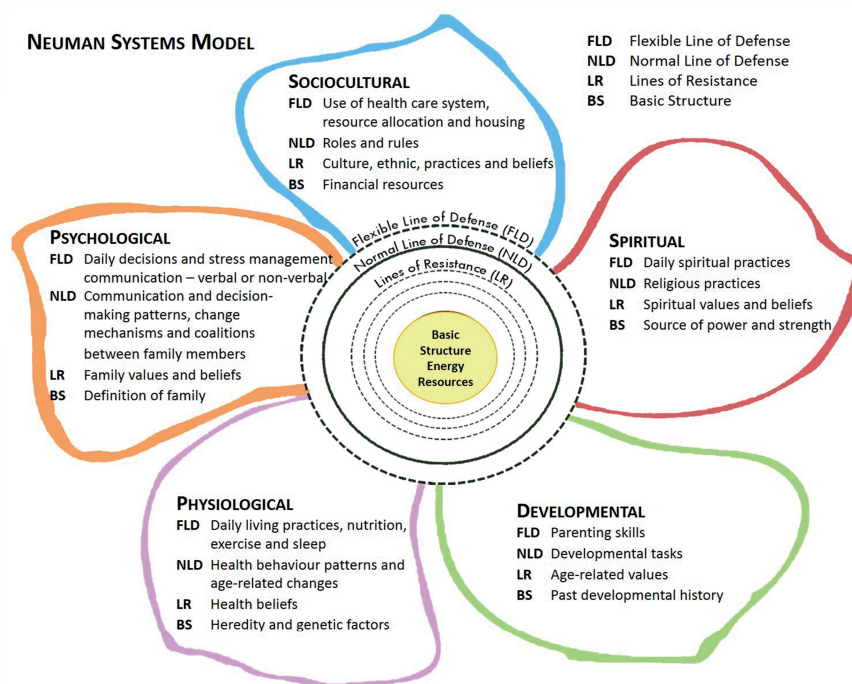


Figure 1. The Neuman systems model (NSM) inspired by Neuman and Reed ^{80, 81}.

The salutogenic theoretical model and sense of coherence

Sense of coherence (SOC) is one of the main concepts in this thesis. Therefore, it was natural to use the salutogenic theoretical model to analyse and discuss the results. Medical sociologist Antonovsky introduced the salutogenic theoretical model and its core construct of SOC as a way to view the world and the environment as comprehensible, manageable and meaningful. Antonovsky proposed that the way people view their life has a positive influence on their health^{83, 84}. The model focuses on general resistance resources, and how a person deals with stressors encountered in life. The salutogenetic concept of SOC can be considered to mediate between health and stress⁸⁵ and measures a person's ability to manage stressful situations and stay well⁸⁶⁻⁸⁸. People with a high SOC cope better with stressful situations than do those with low SOC^{85, 89}. During early parenthood, fathers have a higher SOC than mothers: mothers need several years to become comfortable in the parental role and continue showing lower levels of SOC than fathers¹. Mothers of children with developmental disabilities reported lower SOC and higher levels of parental stress than their partners, but there were no significant differences in SOC and parenting stress between parents without disabled children⁹⁰. There is a strong correlation between low SOC, parental stress and avoidant coping⁹¹. Fathers with low SOC more frequently use strategies of avoidance, whereas fathers with high SOC more frequently use confrontation, positive reappraisal, and planned problem solving in relation to children from 1 year of age⁹². Parents with depressive symptoms have a lower SOC and perceive their child's temperament as more difficult than parents without depressive symptoms at 3 and 18 months⁶. A person with a stronger SOC has better perceived health, regardless of age, sex or ethnicity⁸⁵. However, SOC does not differ according to parents' age, child's sex, and first or subsequent child⁶. There are differences regarding educational level among mothers, but not among fathers⁶. Children report more psychosomatic complaints if their parents have a lower SOC⁸⁵. Couples with a low SOC have shown a higher risk for separation⁵. Social support from relatives and friends has a positive effect on SOC of parents of young children, and is positively associated with health¹.

Gender

This thesis is about parents, therefore it was relevant to consider gender when describing the journey from pregnancy to early parenthood. Gender influences health, and includes social relations and practices related to biological sex⁹³. The World Health Organization (WHO) argues that gender is understood as socially constructed, behaviours and activities that a specific society considers appropriate for women and men⁹⁴. These may lead to inequalities that favour either women or men, which in turn can lead to inequities in both individual health status and health care⁹⁵. A crucial

development in gender theory was when Connell stated that femininity and masculinity are inherently relational concepts that first have meaning in relation to each other⁹⁶. According to Connell, gender is primarily about the social relations within which individuals and groups act⁹⁷. Connell defines gender as 'the structure of social relations that centres on the reproductive arena, and the set of practices that bring reproductive distinctions between bodies into social processes'⁹⁷ (p. 11). Gender is something that is socially constructed, not innate⁹⁸ and varies within different societies⁹. Gender patterns may differ between cultures, are reproduced socially, based on shared capacities and the co-operative labour of women and men, and have consequences in families' everyday lives⁹⁷. For example, gender inequality in the division of housework and child care is associated with partnership dissolution⁹⁹. Connell describes the importance of democratization in the family for individuals to be able to get some of the gender system values and thus be able to enjoy the human values of life, including children who are a source of happiness and development⁹⁷.

According to Hirdman, gender is about the beliefs linked to women/females and men/males, but also values and power¹⁰⁰. Furthermore, there is a tendency to create different norms, values and expectations linked to those beliefs¹⁰⁰. Hirdman describes two basic principles in a gender system: dichotomy (distinctly separate genders) and hierarchy (ranking)¹⁰⁰. The principle of dichotomy refers to the perception of female and male as two different things, or as opposites, although women and men are relational concepts¹⁰⁰. The principle of hierarchy refers to the man being seen as a universal norm and the woman being seen as a deviation from the norm¹⁰⁰. This means that the male gender is assigned a higher status than the female gender¹⁰⁰. Hirdman argues that in order to change the gender system, the intellectual needs to dominate the biological¹⁰⁰.

Social and cultural norms, policies and practices have changed during the recent decades, resulting in women and men needing to work together and share the responsibility in the family to a greater extent¹⁰¹. There has been a shifting of the focus in promoting gender equality, from women's empowerment to the responsibilities of men¹⁰¹. Men who take greater responsibility for their health have to learn new skills and change socially constructed gender boundaries⁹³. The official Swedish gender equality definition regards women and men as having the same rights, obligations and opportunities within life's important areas¹⁰². The democratic idea of equality has gained the most success in Sweden¹⁰⁰. Hirdman recognizes diversity in that varying needs exist within the genders¹⁰⁰. Families in Sweden have undergone changes in the last 30 years that have resulted in the doubling of the work done by women, and men's increased responsibility for the care of children⁹. This development has been described as Sweden approaching a 'gender revolution' in which the inequality between men and women is gradually reduced^{103, 104}. Nevertheless, there is gender inequality in parental health-care services, where men receive less information and

therefore are not given equal opportunities for support. This results in men being prepared less often than women for parenting as regards combining family and work ¹². Further research is required to ensure effective ways of helping health professionals to support women and men in preparation for parenthood so that resources are used to meet the needs of parents and their newborn ¹⁰⁵.

Rationale

Swedish society offers much parental support, for instance through ANC, CHC and hospital care. Financially, the society pays for all this support from pregnancy until the child is 19 years old. Parents also profit from generous parental leave policies until the child is 12 years old. However, parents are not always satisfied with the support offered. Despite all the support given to parents, there is a lack of information about the type of support that parents request. Although parental support promotes the positive development of children, the support for parents from the health-care system is currently inadequate ^{34, 105, 106}. Compared with mothers, fathers receive lower levels of support and insufficient engagement with ANC and CHC organizations. Men can feel that midwives do not involve them during pregnancy and birth ¹⁰⁷ and often experience traditional gender norms as shortcomings in parental education ^{34, 108}. Mothers and fathers sometimes experience depressive symptoms and parental stress in early parenthood, which can negatively affect the whole family ^{49, 74, 77}.

Fathers' involvement in parenting and with the child can lead to positive health effects, not only for the men themselves, but also for their partners and children ^{12, 13}. Previous research has mainly focused on mothers' experiences of pregnancy and parenthood. Few studies have investigated both mothers' and fathers' experiences, especially with the mother and father from the same couple. There is a need to fill the gap in knowledge about what expectant parents request in the way of support and about fathers' involvement. Further, there is a need for increased knowledge of mothers' and fathers' dyadic consensus, depressive symptoms and parental stress during early parenthood. Such knowledge can be used to promote parents' health and to help health professionals prepare effective parental education from pregnancy to early parenthood. Societal awareness about the existence of problems during early parenthood also needs to be raised.

Overall and specific aims

The overall aim was to describe the perceived needs for support and fathers' involvement among expectant parents, and to examine depressive symptoms and parental stress in early parenthood among mothers and fathers.

The specific aims of the individual studies were to:

- I describe expectant mothers' and fathers' perceived needs of support during pregnancy:
- II examine parents' levels of self-reported depressive symptoms, and whether mothers' and fathers' levels of dyadic consensus at childbirth were associated with depressive symptoms, 3 months after childbirth:
- III (a) examine and compare parental stress in early parenthood among mothers and among fathers, in relation to educational level, parental experience, existence of a parental role model and SOC, and (b) examine dyadic consensus and its association with parental stress within couples:
- IV assess the perceived level of parental stress in early parenthood and examine differences between mothers and fathers within couples in relation to levels of education, parental experience, existence of a parental role model and SOC: and
- V describe the perspective of expectant mothers and fathers on fathers' involvement during pregnancy.

Methods

Study design and setting

Studies I and V were based on interviews from the Government's Commission on Parenting Support in Sweden, 2008 [Föräldrastöd – en vinst för alla]. Studies II–IV were based on questionnaires included in the Child Healthcare Today [Barnhälsovård i Tiden (BiT)] study. Information regarding the design, methods, participants and data analysis is presented in Table 1 and will be explained further in the Participants and data collection section.

Table 1. *Design, methods, participants and data analysis.*

Study	Design	Interviews/ Questionnaires	Participants	Instrument	Data analysis
I	Qualitative descriptive study ^a	Interview 4 focus groups 13 individuals	22 expectant mothers 10 expectant fathers	Interview guide	Systematic text condensation
II	Descriptive, comparative study ^b	Survey questionnaires at baseline and 3 months	305 couples (baseline) 249 couples (baseline + 3 months)	Dyadic consensus /DCS ^d Depressive symptoms /EPDS ^d	Descriptive McNemar's test Spearman's rank correlation test Pearson's χ^2 -test Fisher's exact test Wilcoxon signed-rank test Mann-Whitney <i>U</i> test
III	Descriptive, comparative study ^b	Survey questionnaires at baseline and 18 months	401 mothers (baseline) 396 fathers (baseline) 320 mothers (baseline + 18 months) 315 fathers (baseline + 18 months)	Dyadic consensus /DCS Parental stress/SPSQ ^d Sense of coherence /SOC-3 ^d	Descriptive Spearman's rank correlation test Wilcoxon's signed-rank test Mann-Whitney <i>U</i> test Kruskal-Wallis test
IV	Descriptive, comparative study ^b	Survey questionnaires at baseline and 18 months	393 couples (baseline) 318 mothers (18 months/SOC-3) 311 fathers (18 months/SOC-3) 307 mothers (18 months/SPSQ) 301 fathers (18 months/SPSQ) 283 couples (18 months/SOC-3 + SPSQ)	Parental stress/SPSQ Sense of coherence /SOC-3	Descriptive Wilcoxon's signed-rank test
V	Qualitative descriptive study ^a	Interview 4 focus groups 12 individuals	30 expectant parents ^c (20 expectant mothers, 10 expectant fathers)	Interview guide	Qualitative content analysis

^a part of interview study based on interviews from the Government's commission on parenting support, ^b part of a longitudinal cohort study,

^c the same parents as in Study I except for two mothers, ^dsee abbreviations

Participants and data collection

Studies I and V

Expectant mothers and fathers were recruited from July to October 2008 from diverse settings; by an open lecture at the hospital describing facilities for obstetric and neonatal care, by a midwife at a community centre serving newly arrived immigrants, and by midwives at maternity care units. Individuals interested in participating provided their telephone numbers to receive further information about the study. The individuals were informed that participation in the study was voluntary, and that withdrawal at any time would not jeopardize their care. Thirty-five persons volunteered to participate. Of these, three withdrew before the interviews because of childbirth (one woman), and personal reasons (one couple). Data collection began after informed consent was obtained. As the moderator, the main author conducted four focus group interviews (FGI) ¹⁰⁹⁻¹¹¹, and 13 individual interviews in Study I, and 12 individual interviews in Study V. An observer assisted at the FGIs. The FGIs were conducted at the Centre for Clinical Research in Västerås, Sweden, and lasted 71–109 minutes. The individual interviews were conducted at each participant's preferred location, either at home or at a community centre, and lasted 31–65 minutes. Five of the 13 individual interviews in Study I were conducted in English or through an interpreter compared with two in Study V. The Swedish-speaking parents were given the choice of an individual interview or a FGI. Individual interviews were offered in Swedish, English, or the participant's native language through an interpreter. An interview guide was used in the FGIs and the individual interviews. The opening question ¹⁰⁹ in each FGI or individual interview was 'Please tell us about your experiences becoming a mother/father'. This question was followed by probing questions ¹⁰⁹ to steer the interviews towards the aim of each respective study.

In Study I, a total of 32 expectant parents participated, 22 women and 10 men, and 22 of these were first-time parents (Table 1). The mean age of participants was 31 years (range 21–56 years). Thirty were married or lived with their partner. Pregnancy lengths were between 13 and 39 weeks (median 33.5 weeks). In Study V, a total of 30 expectant parents, 20 women and 10 men, participated. Twenty were first-time parents (12 women, eight men). The same interviews were used in Study I. Participants were 21–56 years (mean 30 years), all were living with their partner and 90% had completed high school. Pregnancy duration ranged from 13 to 39 weeks (median 34 weeks).

Studies II–IV

Figure 2 provides an overview of Studies II–IV, using a timeline from baseline to 18 months.

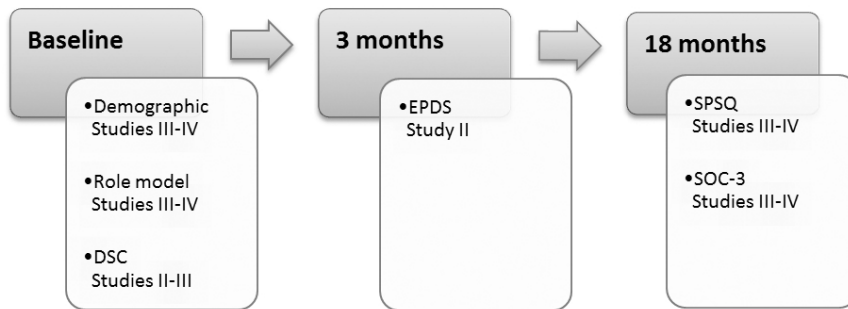


Figure 2. Demographic and instrument used from baseline to 18 months postpartum.

Parents were recruited from November 2004 to September 2006, from eight CHCs in the northern part of the county of Västmanland. At the time, the county had a total population of 261,005 residents: 131,073 women and 129,932 men¹¹². During the inclusion time for the BiT study, 4,622 children were born in the county and of these, 521 children were born in the northern part of Västmanland. Their parents were potentially available to participate in the studies. Inclusion criteria were Swedish-speaking parents with newborn babies. The parents were asked to participate by the CHC nurses, at the registration appointment 1 week after the birth of the child. The parents were recruited consecutively, regardless of whether it was their first child or whether they were already parents. The parents received verbal and written information about the research from the CHC nurse. They were also informed that participation in the study was voluntary, and that withdrawal at any time would not jeopardize their care. Parents who agreed to be included received a cover letter with detailed instructions about the study and how to fill in the questionnaires.

The baseline questionnaires were returned by mail in a prepaid envelope. The questionnaire contained demographic questions, such as social status, occupation, level of education and whether it was the first or a subsequent child (Table 2). There was also a question about a parental role model: ‘Have you had any role model for your role as a mother/father?’ The response options were ‘Yes’ or ‘No, I have no role model’. This was followed by ‘If Yes, who?’ The baseline questionnaire also included the Dyadic Consensus Subscale (DCS)¹¹³. The baseline questionnaire was completed by 401 mothers and 396 fathers (393 couples). Of those who completed the baseline survey, the number of mothers and fathers in

different analyses varied, depending on the internal loss of the respective questions. Because of a printing error, 96 couples missed the DCS question in the baseline questionnaires and were therefore excluded from the data analysis.

When the child was 3 months and 18 months old, an envelope containing questionnaires for both parents was sent by mail. The parents received instructions that it was important the questionnaires were filled in separately by each parent. A postal reminder, including an identical questionnaire, was sent to those who did not reply within 3 weeks, and a telephone reminder was given 5 weeks after the postal reminder.

The 3 month questionnaire contained the Edinburg Postnatal Depression Scale (EPDS) ¹¹⁴. The 18-month questionnaire contained the Swedish Parenthood Stress Questionnaire (SPSQ) ¹¹⁵ and the life orientation questionnaire, Sense of Coherence (SOC-3) ^{86, 116}. The main author was first included after the data had been collected and therefore had no control over the procedure.

Table 2. *Descriptive data for mothers and fathers at baseline.*

	Mothers (n = 401) n (%)	Fathers (n = 396) n (%)
Age (years)	19–45	19–56
Mean age (years)	30.0	32.8
SD	4.95	5.79
Cohabitant status		
Married/cohabiting with the child's father/mother	389 (97.5)	386 (98.0)
Single	3 (0.8)	1 (0.3)
Another family situation	7 (1.8)	7 (1.8)
Level of education		
Comprehensive school, 9 years	26 (6.5)	25 (6.4)
High school, <12 years	241 (60.3)	290 (74)
University, ≥12 years	133 (33.3)	77 (19.6)
Parental experience		
First child	161 (40.3)	175 (44.4)
Not first child	239 (59.8)	219 (55.6)
Parental role model		
Yes	210 (52.8)	111 (28.7)
No	188 (47.2)	276 (71.3)

Instrument studies II–IV

Dyadic Consensus Subscale

The Dyadic Consensus Subscale (DCS) measures the adjustment for a dyadic relationship and is a subscale of the Dyadic Adjustment Scale designed for either married or cohabiting couples¹¹³. The DCS assesses the extent of agreement between partners on matters important to the relationship and contains the following 13 items: ‘Handling finances’, ‘Recreational activities’, ‘Religion’, ‘Friends’, ‘Conventions/correct or proper behaviour’ (hereafter mentioned only as ‘Conventions’), ‘Philosophy of life’, ‘Socializing with family’, ‘Aims and life goals’, ‘Time spent together’, ‘Important decisions’, ‘Household tasks’, ‘Leisure time interests and activities’ and ‘Decisions regarding career/personal development’¹¹⁷. Response options range from ‘Always disagree’ to ‘Always agree’ on a Likert scale (0–5), with a total score of 65¹¹³. Higher scores indicate greater agreement with the partner¹¹³. The DCS demonstrates factorial invariance across gender and can be used as a valid instrument for actual differences in relationship adjustment¹¹⁸. The DCS has been shown to have high reliability¹¹³.

Edinburgh Postnatal Depression Scale

The Edinburgh Postnatal Depression Scale (EPDS) measures depressive symptoms postpartum^{119–121} and is a 10-item self-report scale, scored on a four-point scale (0–3) with a total score of 30. Higher scores indicate more depressive symptoms. All questions in the EPDS have to be answered to be able to estimate the person’s level of depressive symptoms^{114, 122}. Cox recommend a cut-off of > 9 to identify risk for postnatal depression and a cut-off of > 11 to identify depressive illness of varying severity¹¹⁴. In the present study, the cut-off of > 9 was used for the mothers and the fathers. The scale has been validated on mothers^{114, 120, 123, 124} and fathers¹²⁵. In this thesis, the EPDS cut-off of > 9 indicated depressive symptoms.

Swedish Parenthood Stress Questionnaire

The Swedish Parenthood Stress Questionnaire (SPSQ) measures parental stress and is a revised version of the parent domain of the Parenting Stress Index^{126, 127}. The SPSQ contains 34 items in five sub-areas and focuses exclusively on the parents^{55, 127}. The sub-areas are: ‘Incompetence regarding parenthood’ (hereafter mentioned only as ‘Incompetence’), consisting of 11 items about the general experiences of caregiving, feelings of incompetence in the parental role and the difficulties of parenthood, for example, ‘More difficult than expected to raise child’: ‘Role restriction’, consisting of seven items about the restrictions in the time and opportunities for the parent’s own interests and activities attributable to parental responsibilities, for example, ‘Child takes all time’: ‘Social isolation’, consisting of seven items about social contacts outside the family, for example: ‘Feeling of loneliness’:

‘Spouse relationship problems’, consisting of five items about social experiences within the family, for example, ‘More problems in relationship with spouse’: and ‘Health problems’, consisting of four items about the parent’s physical health, with a focus on changes in aspects of health such as physical fitness, infections and fatigue, for example, ‘More tired than before’. Response options range from ‘Strongly disagree’ to ‘Strongly agree’ on a Likert scale (1–5), with a total possible score of 170¹²⁸. Higher scores indicate higher stress. The SPSQ has been found to be a valid and reliable instrument for measuring parental stress in the parents of young children^{127, 129}.

Sense of Coherence

The Sense of Coherence (SOC-3) measures how individuals manage stressful situations and is a condensed three-item instrument developed by Lundberg and Nyström Peck (1995), based on Antonovsky’s original 29-item instrument^{86, 116}. The three questions address Comprehensibility (‘Do you usually feel that the things that happen to you in your daily life are hard to understand?’), Manageability (‘Do you usually see a solution to problems that other people find hopeless?’), and Meaningfulness (‘Do you usually feel that your daily life is a source of personal satisfaction?’). The response options are ‘Yes, usually’ (0 points), ‘Yes, sometimes’ (1 point) and ‘No’ (2 points). The comprehensibility question is reverse scored. The resulting index ranges is 0–6. A higher score indicates a lower SOC, and the term ‘poor SOC’ is used for $SOC \geq 3$ and ‘strong SOC’ is used for $SOC \leq 2$ ^{86, 116}. The SOC-3 saves time, and has good validity and reliability¹³⁰. In this thesis, poor SOC is hereafter referred to as low SOC, and strong SOC as high SOC.

Data analysis

Qualitative data (Studies I and V)

A qualitative design was employed. In Study I, a naturalistic inquiry with four FGIs and 13 individual interviews was used. The 17 transcribed interviews were analysed using systematic text condensation in accordance with Malterud’s description^{131, 132}, inspired by Giorgi’s phenomenological method for analysis. The analysis follows four steps (Table 3). Each interview was listened to, and the verbatim transcripts were read several times to develop a sense of the content. After naive reading of the transcribed interviews, themes were identified from the text. The supervisor, one of the co-authors, acted as a co-reader to validate the analysis and check the designated themes against the original interview contents. The next step was to break each theme down into categories (decontextualizing) by using meaningful units belonging to the theme as the units of analysis, rather than the whole interview. A final recontextualization was done by the first author

and co-reader. All designated themes and categories were compared with the original interviews, and appropriate quotations were selected.

Table 3. *Systematic text condensation according to Malterud's description of four steps in the data procedure.*

Steps in the data analysis	Example from data
1) Total impression – from chaos to themes →Preliminary themes	Impression of text: The expectant parents describe a lot of different support wanted and given. Support needed and given.
2) Identifying and sorting meaning units – from themes to codes →Meaning units are sorted to create code groups	Text unit: <i>....other friends that have children, they are a support...it is a security in a way, to know people that have gone through it and it went pretty well for them, nobody passed away, they got a baby. And they haven't changed.</i> Code group: Own resources.
3) Condensation – from code to meaning, as a story told by one individual →The meaning of codes is clarified through abstraction	Abstraction: I understood that friends with experiences are valuable role models. Meaning: New knowledge about pregnancy and friends that have gone through it provide good support.
4) Synthesizing – from condensation to descriptions and concepts →Validation of the results by reading the transcripts again	Essence: New knowledge gained from friends comprehended through earlier understanding regarding support resources. Validation: Confirmed that the code group corresponded to the interview text and the theme recovered in most of the interviews.

In Study V qualitative content analysis was used in accordance with Graneheim and Lundman's description¹³³. Each audiotaped interview was transcribed verbatim and read several times to develop an overview of the interviews and a sense of the content. The analysis process began by highlighting sentences of importance for the study aim. These sentences were first divided into meaning units. Second, the meaning units were condensed and labelled with short codes. Third, the codes were compared to identify similarities and differences. Fourth, categories were developed based on the codes, which included the manifest content, or what the text communicated. Fifth, a comparison and an interpretation of the categories were undertaken, from which the five sub-themes were developed. The sub-themes are the underlying meanings of the categories, that is, they are the expressions of the latent content on an interpretative level. Finally, the sub-

themes formed one theme. An overview of the analysis in Study V is presented in Table 4.

Table 4. *Qualitative content analysis in accordance with Graneheim and Lundman's description of the steps in the data procedure.*

Meaning unit	Condensed meaning unit	Code	Categories	Sub-themes	Theme
Reducing anxiety, calming things down. Because in most cases things work out well. On such forums, they don't say that things go well for 1000 and then that they go badly for one; they talk about the times things go badly, or about complications. I'm more of a reducer of anxiety.	Reducing anxiety, calming down. Most things work out well. On the forums, they don't say things go well for 1000 and badly for one; they talk about things going badly, or about complications. I'm a reducer of anxiety.	Ease anxiety	Anxiety reducer	Trying to be a calming influence	'Paddling upstream'

Quantitative data (Studies II–IV)

All statistical analyses were conducted using SPSS version 17.0, 18.0 or 20.0. A two-sided p -value < 0.05 was considered statistically significant. In Study II, DCS and EPDS were measured on an ordinal scale. Categorical variables were presented as frequencies and percentages. The mother and the father in a couple were considered dependent, and analyses involving comparisons between mothers and fathers were thus analysed using methods for paired data. McNemar's test was used for comparing depressive symptoms between mothers and fathers. Correlations between DCS scores, EPDS scores, and between DCS and EPDS scores were calculated with Spearman's rank correlation. Pearson's chi-square test and Fisher's exact test were used to compare categorical variables. The Wilcoxon signed-rank test was used to measure differences between mothers' and fathers' perceived levels of dyadic consensus. The Mann-Whitney U test was used to analyse differences regarding the perceived level of dyadic consensus

between mothers with and without depressive symptoms, and between fathers with and without depressive symptoms. A printing error in the baseline questionnaire meant that the DCS was missing for 96 couples.

In Study III, the Kruskal-Wallis test for independent samples was used to analyse the differences in perceived parental stress levels in mothers and fathers with three different educational levels (i.e., with 9 years of compulsory school, high school education, or college or university education). For independent samples, the Mann-Whitney *U* test was used to analyse differences in stress levels in mothers and fathers in relation to the presence or absence of parental experience, presence or absence of a parental role model, and strong or low SOC. For dependent samples, the Wilcoxon signed-rank test was used to analyse differences in perceived dyadic consensus within the couple. The association between perceived parental stress and dyadic consensus in the couple was evaluated using Spearman's rank correlation method.

In Study IV, categorical variables were summarized using frequencies and percentages. SPSQ scores were summarized as means and standard deviations. Comparisons between mothers and fathers were performed on a couple basis, where the parents in a couple were considered dependent and methods for paired data were used. Differences in perceived parental stress levels between mothers and fathers were analysed using Wilcoxon's signed-rank test. To examine the influence of educational level, parental experience, existence of a parental role model and SOC on differences in stress levels between the mothers and the fathers in the couples, only homogeneous couples were compared, that is, both parents in a couple had the same educational level (i.e., with or without university education), both had the same parental experience (i.e., with or without parental experience), both had a parental role model or both did not have a parental role model, and both had a strong or poor SOC.

Ethical considerations

In accordance with the ethical principles of the Helsinki Declaration, all participants in Studies I–V were provided with written and verbal information about the study aims and procedures¹³⁴. Participation was voluntary and the participants could withdraw from the study whenever they wanted, with no effects on their health care¹³⁵.

Studies I and V were approved by the Research Ethics Committee at Uppsala. Informed consent was obtained from all participants. Expectant Swedish-speaking mothers and fathers who participated were given the opportunity to choose between an individual interview or a FGI. Some explained that they felt more comfortable in an individual interview rather than speaking in an FGI. To allow a broader range of parents, those who did not speak Swedish were given the opportunity to participate in individual

interviews with the assistance of an interpreter. The parents' confidentiality was guaranteed and pseudonyms were used in the quotations in the results to maintain confidentiality.

Studies III–IV were approved by the Central Ethics Committee at Stockholm. The recruiting nurses were asked to include parents who were both able to fully understand the verbal and written information. Informed consent was obtained from all participants after they had received verbal and written information about the study. The parents' confidentiality was guaranteed.

Results

Study I

In Study I, expectant mothers' and fathers' perceived needs of support during pregnancy are described. The analysis focused on the four themes and 19 categories most pertinent to the support desired by both women and men (Figure 3). These four themes are described in Figure 3.

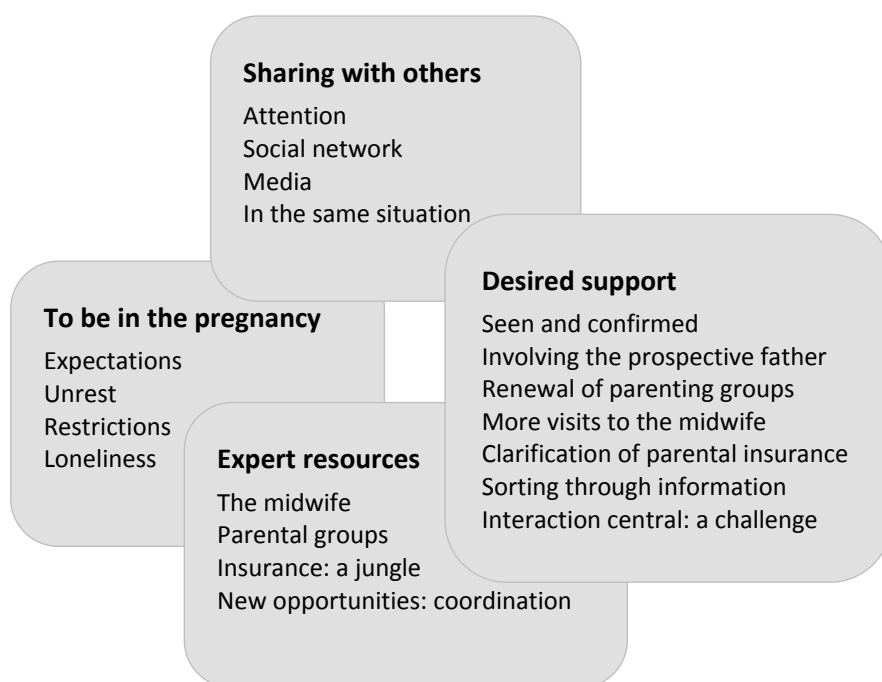


Figure 3. The themes and categories explored with the 32 expectant parents (22 mothers and 10 fathers) in Study I.

To be in the pregnancy. Many of the expectant parents thought pregnancy would be a pleasant time when they could enjoy themselves, but those expectations were not met for the majority of the participants. They often described pregnancy as a time of worries and limitations, when the woman's body changed as a result of physical symptoms. Most of the men said that they had not expected their partner to feel so ill or weak. They tried hard to

offer assistance, adjust to the situation, and reorient themselves toward a different life as pleasurably as possible for their partners; however, even when the men tried to adapt to the new situation, they often felt helpless. Although the women expressed positive feelings about their present and future situations, their contact with maternity health-care services left them feeling frustrated because their expectations were not fulfilled. Several women described the stress and loneliness they felt when they were not having the opportunity to meet the midwife, and they missed her support. Most of the expectant parents found the medical support and information they received useful in helping them understand their pregnancy.

Sharing with others. The expectant parents expressed a need to share their experiences with someone and mentioned their partner as their greatest source of support. Personal support and the feeling of being allied with family were important, particularly for expectant mothers. Living close to the family was also expressed by the women as being desirable. Expectant mothers who had recently moved within Sweden or immigrated to Sweden felt lonely in the absence of their families. Being able to meet their families was a source of happiness. Friends were highly valued, particularly friends who were or had been in the same situation and with whom they could share their experiences of pregnancy. In spite of the support offered by family and friends, women and men requested a forum where they could meet other expectant parents. The parental groups, especially the fathers' group, were seen as a source of strength and support. They wanted to find friends they could socialize with after childbirth. Women used the Internet to connect with other mothers. The Internet was also used as an information channel, although several, mainly men, expressed concerns about the reliability of that information. The parents felt a need for someone to help organize the flow of information, to discuss information they found, and to know if any websites were considered more appropriate than others by maternity health officials.

Expert resources and Desired support. The expectant parents valued the ultrasound examination, which appeared to be a part of adjusting to their future situation. Although the expectant parents were content with the information and medical support they received from the health profession, they described their dissatisfaction with the antenatal clinic. Parents wished for more psychosocial and emotional support. Some expectant fathers were left feeling invisible and expressed a need to be more involved in the antenatal clinic and wanted the appointments to be more meaningful. Expectant mothers expressed a desire to involve the expectant fathers more in the pregnancy, from the first visit with the midwife until the birth at the hospital. Some women expressed a need for special customized father education.

Study II

The baseline questionnaire and 3-month questionnaire were answered by 305 couples. Of these, 260 (85.2%) of the mothers and 252 (82.6%) of the fathers answered all the EPDS questions and could therefore be evaluated for depressive symptoms with an EPDS cut-off of > 9 .

The findings indicated differences in perceived dyadic consensus between mothers and fathers regarding the items: 'Recreational activities', 'Friends', 'Aims and life goals', 'Time together', 'Household tasks', 'Leisure time interests and activities', and 'Decisions regarding career/personal development' (Table 1, paper II). For all of the items except 'Household tasks', the mothers estimated more than did the fathers that the couple agreed.

The results revealed that 43 (16.5%) of the mothers and 22 (8.7%) of the fathers self-reported depressive symptoms (Figure 4). The results indicated that nearly a quarter (23%) of the children had at least one parent with depressive symptoms. Mothers and fathers with depressive symptoms recorded lower levels of dyadic consensus in the items 'Socializing with family and friends', 'Important decisions', and 'Household tasks' than mothers and fathers without depressive symptoms (Table 3, paper II). The correlations between the total DCS and EPDS scores were -0.253 ($p < 0.001$) for mothers and -0.313 ($p < 0.001$) for fathers.

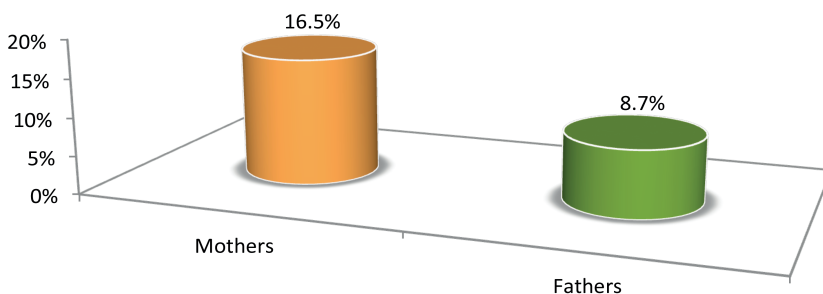


Figure 4. Percentage of mothers and fathers scoring > 9 on the Edinburgh Postnatal Depression Scale three months after childbirth.

Study III

The baseline questionnaire was completed by 401 (100%) mothers and 396 (98%) fathers. Of these, 320 (80%) mothers and 315 (80%) fathers answered the 18-month questionnaire. Sixty-nine (17%) mothers and 65 (16%) fathers were excluded from the baseline analysis because of missing DCS information.

About half of the mothers (52%) reported having a parental role model such as their own mother, compared with 28% of the fathers having a role model such as their own father (Figure 5).

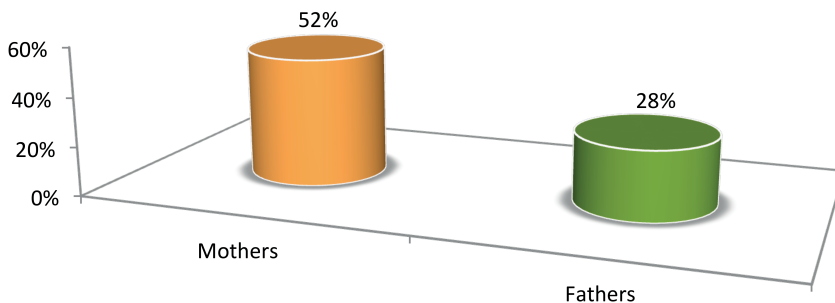


Figure 5. Percentage of mothers and fathers with a parental role model one week after childbirth.

The results showed that mothers with less than high school education, without a role model, and with a low SOC had a higher level of parental stress in the sub-areas of 'Social isolation' and 'Spouse relationship problems' than mothers with higher educational levels, a role model, and high SOC. Mothers with a low SOC had a higher level of parental stress in total stress and in all sub-areas, than mothers with a high SOC (Table 1, paper III). Fathers without a parental role model perceived higher stress in the sub-area of 'Social isolation' than fathers with a role model. Fathers with a low SOC perceived higher parental stress in total stress and in all sub-areas of stress, except for 'Role restriction', than fathers with a high SOC (Table 2, paper III).

Mothers perceived a higher level of dyadic consensus according to the items 'Recreational activities', 'Friends, Aims and life goals', 'Time spent together', and 'Decisions regarding career and personal development' than did fathers. The item of 'Household tasks' was the only item in which fathers perceived a higher level of dyadic consensus than mothers (Figure 6) (Figure 1, paper III).

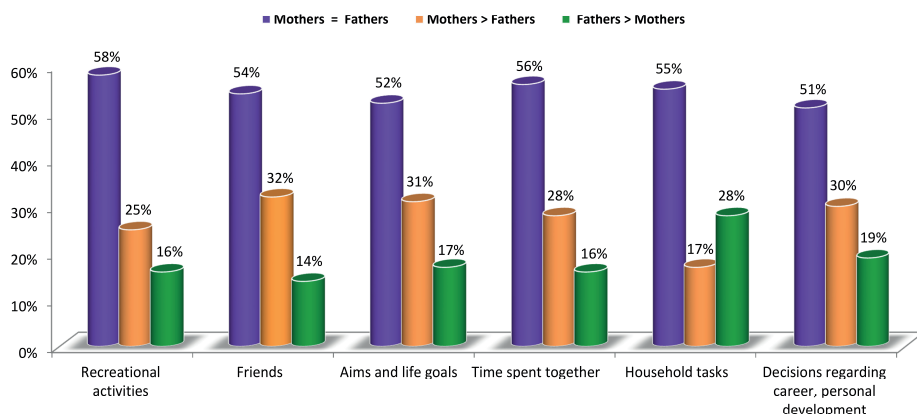


Figure 6. Percentage of perceived dyadic consensus in mothers and fathers one week after childbirth.

Among the couples, there were associations between perceived parental stress and dyadic consensus on several items and in the total score. Further, in three sub-areas of parental stress, ‘Incompetence’, ‘Role restriction’, and ‘Social isolation’, there were associations for all items, except for ‘Religion’, with perceived dyadic consensus (Table 3, paper III).

Study IV

In total, 307 (77%) mothers and 301 (76%) fathers of 18-month-old children answered the SPSQ, and 318 (79%) mothers and 311 (79%) fathers answered the SOC-3 questions, while 283 couples answered both the SPSQ and SOC-3 questions. The results showed that 41 couples had college or university education and 137 did not have this level of education (hereafter referred to as with or without university education), 105 couples were first-time parents and 149 had previous parental experience, 53 couples had a parental role model and 115 had no such model, and that 208 couples had a high SOC and 12 had a low SOC.

Mothers perceived a higher level of stress in total than the fathers (Table 5). Both the mothers and the fathers had their highest level of stress in the sub-area ‘Role restriction’. Mothers had the lowest level of stress in the sub-area ‘Social isolation’ while fathers’ lowest level of stress was in ‘Incompetence’.

Table 5. *Frequencies, means and standard deviations of parental stress in mothers and fathers.*

Sub-area	Number of couples	Mothers (mean \pm SD)	Fathers (mean \pm SD)
Incompetence	302	2.08 \pm 0.606	1.91 \pm 0.536
Role restriction	299	3.32 \pm 0.803	3.06 \pm 0.778
Social isolation	304	2.05 \pm 0.613	2.25 \pm 0.604
Spouse relationship problems	303	2.19 \pm 0.869	2.06 \pm 0.715
Health problems	304	2.62 \pm 0.783	2.49 \pm 0.730
Total ^a	287	2.41 \pm 0.511	2.30 \pm 0.486

^a) number of couples that answered all sub-areas

Mothers perceived higher levels of stress than fathers in the sub-areas of 'Incompetence', 'Role restriction', 'Spouse relationship problems' and 'Health problems', and in total. In contrast, fathers perceived higher stress than mothers in the sub-area 'Social isolation' (Figure 7) (Table 3, paper IV).

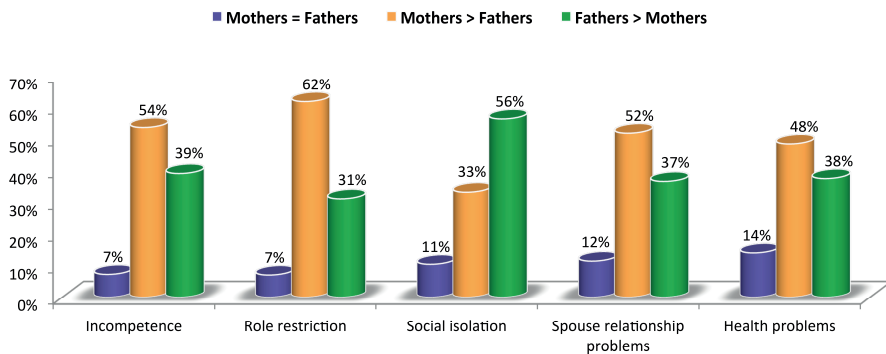


Figure 7. Percentage of perceived parental stress in mothers and fathers with an 18-month-old child.

Mothers with university education perceived more stress than fathers in the sub-area of 'Role restriction', whereas mothers without university education perceived more stress than fathers in the sub-areas of 'Incompetence', 'Role restriction', and 'Spouse relationship problems'. Fathers without university education perceived more stress than mothers in the sub-area 'Social isolation' (Table 4-5, paper IV).

Mothers with parental experience perceived more stress than fathers in the sub-areas of 'Incompetence', 'Role restriction', and 'Health problems', and in total, whereas mothers without parental experience perceived more stress than fathers in the sub-areas 'Role restriction' and 'Spouse relationship problems'. Fathers with and without parental experience perceived more stress than mothers in the sub-area 'Social isolation' (Table 4-5, paper IV).

Mothers with a parental role model perceived more stress than fathers in the sub-areas of 'Incompetence' and 'Role restriction', and in total, whereas mothers without a parental role model perceived more stress than fathers in the sub-areas of 'Incompetence', 'Role restriction', and 'Health problems'. Fathers without a parental role model perceived more stress than mothers in the sub-area of 'Social isolation' (Table 4-5, paper IV).

Mothers with a high SOC perceived more stress than fathers in the sub-areas of 'Incompetence', 'Role restriction', and 'Health problems', and in total. Fathers with a high SOC perceived more stress than mothers in the sub-area of 'Social isolation'. Mothers with a low SOC perceived more stress than fathers in the sub-areas of 'Role restriction' and 'Spouse relationship problems' (Table 4-5, paper IV).

Study V

In Study V, the perspectives of expectant mothers and fathers on fathers' involvement during pregnancy were described. From the analysis, a theme of 'Paddling upstream' emerged as an expression of the latent content. This theme is a metaphor concerning the expectant mothers' or fathers' perspectives on the involvement of fathers during pregnancy. The parents wanted the father to be involved, but he was described as struggling to achieve that involvement. He faced many barriers. The metaphor of 'Paddling upstream'—trying to make headway against the flow of a river—mirrors this struggle. He moves forward, but has to expend a lot of energy to battle against the current. Fathers worried about the mothers' pregnancy, planned for the coming child, and were excited to reach the end of the pregnancy journey. This theme was built up from five sub-themes comprising the manifest content, as shown in Figure 8.

Paddling upstream

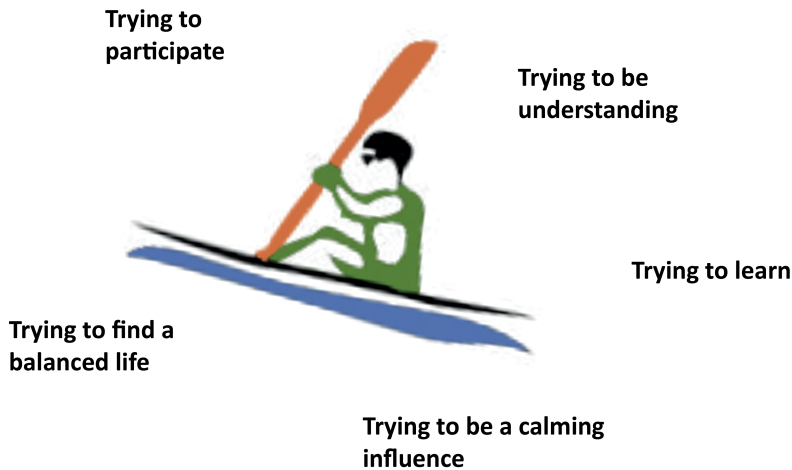


Figure 8. The theme and sub-themes identified from 30 expectant parents (20 expectant mothers and 10 fathers).

Trying to participate

Both parents wanted the father to participate and he tried in different ways. Even though the mother was carrying the foetus, both parents described the pregnancy as an unreal experience in which being fully involved was more difficult for the father. The mother wanted the father to have a greater role and one way was to accompany her on visits to the midwife. This supported the mother in a unique way because he knew her best. The father wanted support as well but on these visits, he felt overlooked and superfluous because the information and communication were directed at the mother. The ultrasound examination was a turning point as the pregnancy became more real for them both and created an invisible shared bond that strengthened their relationship. After that, the father took more responsibility in the preparations for the delivery, including practical measures such as purchasing items for the child.

Trying to be understanding

Fathers described how the pregnancy made their partners more important to them, and how they cared for the partners more than before. Fathers supported and took care of household matters, which was a great relief to the mothers. The father was not always successful because the mother did not clearly express her needs, but expected him to notice those needs. When he was successful and noticed his partner's needs, she felt looked after and this

gave her hope for the future, that he would take responsibility for the family. Despite the woman becoming more irritated because of the pregnancy, she nevertheless experienced greater understanding from the father. The fathers did not always find this easy to manage. The fathers were more attentive, thoughtful and understanding; even though the mothers felt undeserving. Fathers tried to understand the mothers' irritation or strange behaviour because they thought it was something that was normal for pregnancy.

Trying to learn

Fathers wanted to prepare themselves by learning about pregnancy, delivery, parenthood and meeting other expectant fathers and mothers. They took part in midwife visits, parenting classes, father classes, and psychoprophylaxis courses where father classes were particularly appreciated. The psychoprophylaxis course, at which fathers were able to gather practical knowledge in preparation for the delivery, was especially valuable in providing opportunities for parents to communicate and learn about breathing and relaxation. The father commonly asked the mother first for information about pregnancy, childbirth and parenthood, and after that consulted friends who had children. The fathers sought knowledge on the Internet, from books, newspapers and personal contacts but considered it important not to gather too much information, feeling that they did not have the competence to identify which information was most relevant.

Trying to be a calming influence

Fathers tried to calm the mothers' inevitable anxieties by being reassuring when something disturbed her, discussing issues, and giving comforting hugs when needed. The father wanted to facilitate for the mother, and be a balancing factor when she was anxious about what might happen during the pregnancy and delivery. This role became clear when it came to information on the Internet, and various forums for chatting in which the mothers took part. The father took part when the mother brought up something from a forum, although he may have felt that she should avoid these venues and should realize that she had limited control over the pregnancy and delivery situations. However, the father felt she should prepare herself better by reading and preparing mentally. When fathers reflected on what would take place at the delivery and thereafter, mothers found this to be quite reassuring. The father took part by listening when the mother described what made her fearful, and by being present. The father, who himself was worrying, tried not to show this to the mother, even when she was aware of his anxiety.

Trying to find a balanced life

The fathers took part in trying to balance their family's lives, including work, careers and leisure activities, and for some, children as well. Finding sufficient time for everything was difficult but they took more responsibility

than before. Even though fathers wanted to be involved in the pregnancy, and both parents wanted him to take part in the midwife visits, the father also had to prioritize other matters. With the mother's agreement, the father sometimes prioritized work and, in the case of experienced parents, other children. The father was doing what the mother said he should do; from his perspective, she was considered to bear the main responsibility for the family even if they shared the workload. When they did have time together, it was affected by her fatigue and stress at not being able to manage life as before. The parents described pressures that were sometimes troublesome. Even though they realized that life would be more difficult to manage after the birth, it was a joint decision to have a child and they waited for the arrival of their child, even at the cost of their closeness and time together.

Discussion

Discussion of key findings

The overall aim was to describe the perceived needs of support and fathers' involvement among expectant parents, and to examine depressive symptoms and parental stress in early parenthood among mothers and fathers. The main findings were that the expectant parents described different kinds of needs and suggestions for improving parental health care (Study I). One main improvement was better involvement of the expectant father as he was a good support for the mother (Studies I and V). Expectant fathers used different strategies to get involved in the pregnancy but sometimes found it difficult to perceive what was expected of them (Study V). Mothers and fathers with depressive symptoms reported lower dyadic consensus than mothers and fathers without depressive symptoms (Study II). Mothers reported higher levels of depressive symptoms and parental stress than did the fathers (Studies II–IV). Further, mothers reported higher dyadic consensus than fathers except for 'Household tasks' (Studies II and III). Mothers and fathers without parental role models reported higher stress in 'Social isolation' than did mothers and fathers without parental role models (Study III). Further, in the couples, mothers reported higher stress than fathers in all sub-areas of stress except for 'Social isolation,' where fathers reported higher stress than the mothers (Study IV).

Transition to parenthood in relation to the Neuman systems model

During pregnancy, the expectant mothers and fathers described different kinds of needs (Study I). Mothers' needs were predominately addressed by the health services, but fathers often felt invisible. The expectant father tried to support the mother, but had his own needs as well. In accordance with the NSM^{80, 81} families should not be treated as a given group—each person in the family needs individual attention from the health professionals in maternity care. Health professionals should understand the interdependency of the family, in order to optimize the health of the expectant parents during their transition to parenthood. Sharing experiences with other expectant parents is an important source of peer emotional support⁶. The results also showed that both expectant mothers and fathers indicated that engagement from the father is important (Study V). It is not only the father's engagement during

the pregnancy that is important for his child's future and health, but also the father's future presence and engagement. In a Swedish study, Sarkadi et al. established that fathers' engagement has positive effects by reducing the frequency of behavioural problems in boys and psychological problems in girls¹³. Assumptions that can be made from the existing knowledge are that the father's involvement in the child's life from pregnancy is important for the prevention of problems in the child and that health professionals should focus on the father to a greater extent.

After childbirth, more mothers than fathers experienced depressive symptoms (Study II). This is supported by previous studies^{51, 74}. Results indicated that the mothers also perceived higher levels of parental stress than did the fathers (Studies III and IV). Previous studies^{49, 77} support this result by demonstrating that fathers reported more social isolation and anxiety than mothers. Depressive symptoms and parental stress viewed through the NSM⁸¹ indicate that both mothers and fathers need to be motivated to manage their environmental stress factors in order to maintain functioning and structure for optimal family system stability (i.e., health).

The results also revealed that mothers had higher dyadic consensus for most of the items except for 'Household tasks', where the fathers had higher dyadic consensus (Studies II and III). According to the NSM, our result indicates that the physiological, psychosocial, sociocultural and developmental factors are all important for mothers' relationships with their partners, whereas the physiological factor seems more important for fathers. It seems that fathers desire to be included in the daily living practice. Perhaps fathers believe that they do their share of household tasks to a greater extent than mothers actually think.

The parents with depressive symptoms reported lower dyadic consensus than parents without depressive symptoms (Study II). This discrepancy in dyadic consensus may create stressors⁸² within the family. Parents with less dyadic consensus had more parental stress in the sub-area 'Spouse relationship problems' (Study III). This indicates a possible problem in the family. A particular association worth noticing was between perceived parental stress in the sub-area 'Spouse relationship problems' and perceived dyadic consensus in the item 'Leisure time interests and activities' (Study III). When parents disagree about how to raise a child, their parenting ability may be affected¹³⁶. Relationship problems are known to be related to divorce, which can be harmful for the family¹³⁷ and affect the child's psychological well-being¹³⁸. In contrast, good partnership and co-parenting relationships decrease parental stress and improve parental efficacy¹³⁹. Our results showed that mothers and fathers without parental role models reported higher stress in 'Social isolation' than did mothers and fathers with parental role model (Study III). The 'Social isolation' subscale focuses on contacts outside the family so it is possible our finding was caused by the newly mentioned explanation with the lack of social contacts. Another explanation could be that parents lacking role models may be less prepared

for parenthood and therefore experience more stress. This is suggested by other studies¹⁴⁰⁻¹⁴².

Multiple family stressors can affect a person's health. To prevent these stressors, health professionals can offer and integrate information on parenting skills and family responsibilities into counselling and parental education. Parental education should include open discussions and mentoring linked to pregnancy, childbirth and early parenthood. An important area to discuss is the sharing of responsibilities in the family, during both pregnancy and early parenthood. Contact with others strengthens parents and helps them cope with stress situations and increase well-being in the family. The goal of primary stress prevention for both expectant and experienced parents⁸¹ is to promote family wellness through stress prevention and risk reduction factors. Health professionals in maternity care should increase their knowledge about the importance of fathers' involvement and how they could be involved more during the pregnancy.

Transition to parenthood in relation to the salutogenic theoretical model and sense of coherence

The expectant parents indicated that the fathers had attempted to become involved in the pregnancy and with the expected child (Study V). However, the fathers found it difficult to know what their partners and society expected of them. Perhaps the fathers strove to become involved during early parenthood but did not feel they could be as involved as the mothers. For many of the families, especially the first-time parents included in the study, daily life changed after childbirth from being focused on the couple's relationship to being focused on the child—leading to a loss of control of their own lives⁴. This change might be more obvious to the fathers in relation to their preparedness for becoming parents^{7,8}.

In Study III, the number of mothers with high SOC (n=270) was higher than the number of fathers with high SOC (n=256). Because SOC comprises the concept of 'Meaningfulness' as the importance of being involved¹⁴³, it may be that the fathers did not feel 'meaningfulness' in the same way as the mothers. The results also revealed that mothers with a low SOC perceived higher stress in all sub-areas of stress than did mothers with a high SOC. Further, fathers with a low SOC perceived higher stress in all sub-areas, except for 'Role restriction', than did fathers with a high SOC. Several studies have also found a correlation between low SOC and higher parental stress⁹¹, and between low SOC and more depressive symptoms in parents⁶. Parental stress and low SOC can lead to fatigue and burnout¹⁴⁴. It is therefore important to discover these conditions and early; health professionals need to pay more attention to stress among both mothers and fathers.

The mothers with high SOC perceived more stress than the fathers in the sub-areas 'Incompetence', 'Role restriction' and 'Health problems', and in

total, whereas the situation was reversed for 'Social isolation' (Study IV). With regard to 'Role restriction', it is not surprising that mothers still spend more time doing household duties and have a higher total workload than do fathers ¹⁴⁵, and therefore seem not to get time for their own interests and activities. When both the mothers and fathers had high SOC there was no difference in the sub-area 'Spouse relationship problems' (Study IV). One may speculate that the mothers and fathers could manage their situation better with a higher SOC and that this would positively affect their relationship, as reported previously ⁸⁵. This could be explained by the fact that it is the only sub-area measured in parental stress that includes social experiences within the family, as the relationship depends on both partners. It may be that individuals with a high SOC more easily form good relationships with other people in addition to their partner. If a person has a high SOC, she or he may be less dependent on their partner's opinions, and therefore are able to act as they wish.

Of those with low SOC scores (Study IV), the mothers perceived more stress than the fathers in the sub-areas 'Role restriction' and 'Spouse relationship problem'. This could be explained by individuals with low SOC being more dependent on each other and therefore 'Spouse relationship problems' being more common. Both mothers and fathers with low SOC and without a role model had a higher level of perceived parental stress in the sub-area 'Social isolation' than did mothers and fathers with a high SOC and a role model. The subscale 'Social isolation' focuses on contacts outside the family. Parents with a high SOC and a role model seem to socialize more than do those with a low SOC and no role model. Many mothers and fathers do not have relatives and parents of their own nearby ^{24, 146} and perhaps this can partly explain why the mothers and fathers in this thesis felt more isolated. Ahlborg et al. declared that support from relatives and friends has a positive effect on SOC ¹. Eriksson and Lindstrom have also indicated that parents with low SOC have children who report more psychosomatic complaints than do parents with a higher SOC ⁸⁵. This makes it even more important to highlight the problem so that interventions can be used.

Transition to parenthood from a gender perspective

During pregnancy, the results (Studies I and V) showed inequalities among the expectant mothers and fathers. The finding of 'invisible' fathers demonstrates the gender inequality in antenatal care, with the needs of the expectant mothers and fathers not adequately met. The identification of factors associated with gender inequality emphasizes the importance of a more gender equal provision of health promotion ^{34, 39}. Gender inequalities in Swedish ANC are remarkable because one of the goals of ANC in Sweden is to provide support for both parents by preparing them for childbirth and parenting ²⁶. However, gender norms in society ⁹⁷ are reflected in the families, and in the ANC, with predominantly female midwives working in a

traditionally female-dominated area ^{34, 147}. While norms in society have shifted slowly, it seems that prenatal health services have not changed their approach, and still rely on medically oriented values. The expectant parents suggested improvements in the antenatal classes to make them more attractive to today's expectant parents, and this has previously been suggested by others ^{43, 148}. Parent education groups should provide an opportunity for sharing with others in the same situation rather than serve as a forum to convey information.

In general, the expectant mother described her partner's support as unique because he understood her best. This is supported by May and Fletcher ¹⁴⁹. The expectant fathers assumed that mothers have the main responsibility for the home and family. It seems that the expectant mothers possessed more power than the father in the family arena; the expectant fathers allowed the expectant mothers to decide what should be done and did what the mothers asked them to do. It is plausible that the women hesitated to give up the power in the home because they lack power outside the home (i.e., in paid employment). This form of 'hegemonic femininity' is the opposite to the 'hegemonic masculinity' described by Connell as the superior to femininity ¹⁵⁰. These results indicated that both mothers and fathers still expected inequity in their relationships, and this is supported by Askari et al. ¹⁵¹. This may be because of the biological fact that the mother carries the baby during pregnancy and breastfeeds. However, to change the gender system, Hirdman argued that the biological elements should not be allowed to dominate over the intellectual elements ¹⁰⁰. The biological factor does not explain why fathers still do not 'take care of the sick child' (in Swedish, 'vård av barn') to the same extent as mothers do. From 2000 to 2013, no changes in this task have been seen in Sweden; more mothers (66%) than fathers (34%) are responsible for this task ⁴⁵.

Insufficient communication, when the expectant mother does not explain her needs to the expectant father (Studies I and V), and having a higher workload and more control over household duties than the father ^{145, 152}, can be some of the contributing factors to the higher stress mothers experience compared with fathers. This could be a reflection of both gender norms in families and in society, which is in accordance with Connell ⁹⁷. One can speculate about what might happen if an experienced father continued to let the mother have the primary responsibility for the home and family. He continues to expect her to express her needs and she does not express them but continues to expect him to see her needs without telling him about them. This insufficient communication between them might create a lot of parental stress.

In early parenthood, the results (Studies II and III) showed disagreement in one area of perceived dyadic consensus; the fathers perceived a higher level of dyadic consensus than did the mothers in 'Household task'. This might be explained by mothers having a need for more practical help than they received. Further, the mothers still take more responsibility for the

home and childcare than do fathers ^{49, 151}, and mothers are dissatisfied with their partner's participation in childcare and household chores ¹⁵³. Previous studies indicate that the fathers' contribution to household chores is equal only if their partner works full time ¹⁰.

However, the parents perceived that they agreed (Studies II and III) about 'Handling finances', 'Religion', 'Conventions', 'Philosophy of life' and 'Socializing with families and friends'. The finding of agreement in 'Handling finances' is in contrast to a previous study, which found that disagreement about finances is a major source of conflict in the relationship ¹⁵⁴ but this diversity may be explained by the studies being performed in different cultures and in different years and therefore being variable.

The mothers perceived a higher level of stress than the fathers (Studies III and IV). However, the mothers and fathers experienced parental stress in different areas during early parenthood, which is in accordance with other studies ^{49, 155, 156}. Mothers perceived higher levels of stress than fathers in all sub-areas of parental stress except for 'Social isolation' where fathers perceived higher stress than mothers (Study IV). One explanation may be that mothers experience more stress from paid work, conflicting demands and a greater overall workload than fathers ^{145, 152}. Even though Sweden has one of the most comprehensive and egalitarian parental leave policies in the world ⁴⁶, fathers use only one-quarter of the parental leave ⁴⁵. Understanding gender differences between parents is the first step to addressing gaps in knowledge, which may contribute to reducing disparities in participation in the care of their child.

Regarding the different sub-areas of stress, the mothers' lowest level of stress was in the sub-area 'Social isolation' while the fathers was in 'Incompetence' (Study IV). Even though parents in Sweden are slowly coming closer to gender equality by gradually reducing the inequality between mothers and fathers ¹⁰³ inequality still exists. This could be explained by inequality in the typical life situations encountered by mothers and fathers ⁴⁴. A study by Askari et al. showed that even if women and men want equality and men want to share housework and childcare, women still expect to do more household and childcare chores than men expect to do ¹⁵¹. Perhaps this can partly be explained by maternal gatekeeping, which can hinder some fathers in trying to be more engaged ¹⁵⁷. Mothers' general responsibility for children and household work is well known ¹⁵⁸, even if the situation is changing in Sweden and other Western countries ^{12, 101}.

The results also showed that about half of the mothers had a parental role model such as their own mother, but only one-quarter of the fathers reported having a parental role model. One can speculate that the lack of one's father as a role model can explain why an expectant father takes a more passive role in the household, and why he lets the expectant mother carry the main responsibility and acts when she tells him to.

It is important to focus on gender aspects during the journey from pregnancy to early parenthood when suggesting improvements to meet

varying parental needs and in preventing parental depressive symptoms and stress. A future challenge would be to develop programs that support the fathers' involvement and to create forums in which health professionals can learn about gender issues. Having male educators, making prenatal care appointments and parental education classes available during evenings and weekends, and using convenient techniques such as Internet-based parent education¹², may be potential facilitator factors for greater equality. A recent Swedish study suggested that a positive attitude towards parenthood and flexible working conditions are beneficial for parents' work engagement and for well-being among working parents¹⁵⁹. It must not be forgotten that it is each individual parent's own responsibility to improve her or his own environment and behaviour. The mother should increase her ability to include the father in the family, and health professionals should increase father involvement in an attempt to address the existing gender norms.

Methodological considerations

Pre-understanding

In all research it is important to be aware of the researchers' pre-understanding. This allows strengthening of the study's trustworthiness by being open to the subjective and to handling knowledge production in a thoughtful and open manner¹⁶⁰. Having knowledge about caring for expectant parents and parents in early parenthood, as well as the research literature concerning these groups, can be seen as both strength and a limitation in Studies I and V. The FGI observer had a different pre-understanding and functioned as a controller. Furthermore, during the analysis process, other authors, with different pre-understandings controlled the study method. All the studies in this thesis were discussed several times among the authors and in research seminars with both qualitative and quantitative approaches at the Department of Public Health and Caring Sciences, Uppsala University, and the Centre for Clinical Research, in Västerås. As this thesis contains both qualitative (Studies I and V) and quantitative research methods (Studies II–IV), it needs different terminology, that is, concepts for describing criteria of trustworthiness and rigour. These concepts are discussed under the next headings.

Although the use of a qualitative or quantitative method depends on the purpose of each study, both can enrich the research project¹⁰⁹. In this thesis, qualitative findings from Study I and quantitative findings from Studies II–IV formed the basis for the qualitative design of Study V. Although results from qualitative studies do not seek to make their findings generalizable, they may well be transferable to similar contexts relating to groups or

situations^{109, 160}. The purpose of quantitative studies is that findings could be generalized in other contexts than where they were measured¹⁰⁹.

Trustworthiness (Studies I and V)

Within the qualitative research tradition three common concepts are used: credibility, dependability and transferability¹⁰⁹. These three aspects of trustworthiness should be viewed as being intertwined and interrelated¹³³.

Credibility is considered to be a criterion for evaluating integrity and quality, referring to confidence in the truth of the data (analogous to internal validity in quantitative research)¹⁰⁹. An interview guide (pilot tested) was used in both the FGIs and in the individual interviews and the same interviewer conducted all the interviews. Expectant parents could choose how they preferred to participate, either in a FGI or an individual interview.

As discussed in earlier studies^{111, 161}, the informants generously shared their experiences with other participants in the focus groups and reinforced previous findings that expectant parents wanted to share their experiences with others in the same situation as themselves. The strength of FGIs is the interaction between participants¹¹⁰. This was clearly proven by the participants when they turned to each other, listened carefully when somebody talked, and encouraged each other. In the individual interviews there was a risk for a therapeutic or educational conversation to take place because the interviews were conducted by the author (a midwife). The awareness of the risk helped the author to maintain the purpose of the interview. The advantage of offering the participants the choice between FGIs and individual interviews was that those who did not feel comfortable with sharing their experiences in a group could still participate in the study. Although the use of an interpreter allowed for a broader range of parents, to be interviewed, those who participated through interpreters might have been limited in what they were able to share.

Dependability is a criterion for evaluating integrity, referring to the stability of data over time and conditions (analogous to reliability in quantitative research)¹⁰⁹. After the interviews, the research midwife, the observer or the participants made a short summary and the participants had the opportunity to verify what was written¹⁶². After the FGI, the moderator and observer discussed the findings and notes from the observer. Use of a co-reader is seen as a measure of enhancing the dependability of findings, that is, how well the final descriptive categories correspond to the original data. In Study I, one of the co-authors acted as a co-reader to validate the analysis and check the designated themes against the original interview content. A final recontextualization, where the themes and categories were compared with the interviews and where quotations were selected, was then carried out by the author and co-authors. In Study V, the author and co-authors compared the steps in the analysis, and the emerging categories and subthemes were discussed by all authors. Appropriate quotations from the

interviews, translated from Swedish to English by a professional native English-speaking translator, were used for every sub-theme.

Transferability is the extent to which findings can be transferred to other settings or groups ¹⁰⁹. The study setting, participants, data collection procedure and analysis steps were thoroughly described. There were several strengths that enhanced the transferability. Participants were recruited from diverse settings through an open lecture at the hospital describing facilities for obstetric and neonatal care, by a midwife at a community centre that served the newly arrived immigrants, and by midwives at maternity care units. Both first-time and experienced parents participated and the expectant parents were both Swedish and non-Swedish.

Validity and reliability (Studies II–IV)

Within the quantitative research tradition, where things should be measured, two main concepts of validity and reliability are used and sometimes referred to as the research's *scientific merit* ¹⁰⁹. For a measurement instrument to be used, its validity and reliability must be known.

Validity is a quality criterion referring to the degree to which inferences made are accurate and well-founded ¹⁰⁹, whether the instrument measures what it is intended to measure and whether the same measurement will be recorded at each measurement time ^{109, 160}. The instruments in the questionnaires—DCS, EPDS, SPSQ and SOC-3—are well-used and valid instruments for parents during early parenthood ^{86, 113-116, 127}. However, self-reported instruments can have their limitations. Whether the mother or the father answered the questionnaires individually cannot be determined, even if they were encouraged to do so.

Reliability is the degree of dependability or consistency with which an instrument measures an attribute ¹⁰⁹. The findings in the thesis were congruent with other studies. For example, depressive symptoms were found in both mothers and fathers, and parental stress was more common in mothers than in fathers, results that strengthen the possibility of generalizing the findings in the same context.

Strengths and limitations

Some strengths have already been mentioned under the subheading of 'Trustworthiness'. One was that both FGIs and individual interviews were offered, so that those who could not join a FGI were able to participate in individual interviews ¹⁶³. Some participants declared that they felt more secure in an individual interview and that they would not dare to give the same information in a FGI, so these methods complemented each other ¹⁶⁴. FGIs aim to generate discussion and negotiation on a topic, while individual interviews aim for in-depth probing. Nevertheless, the results from the two

types of interviews revealed similar content and did not contradict each other, which is in accordance with other studies ¹⁶³⁻¹⁶⁵. In Study I, systematic text condensation was used, which represents a pragmatic approach for analysing qualitative data for novice researchers ¹³² and therefore was used for all the interviews in the Government's Commission on Parenting Support in Sweden, 2008 ¹⁶⁶ in which this study was included. In Study V, qualitative content analysis was used. It is well-known as a method well-suited to the analysis of data of multifaceted, sensitive phenomena in nursing ¹⁶⁷, which applied to this study because it focused on expectant mothers' and fathers' perspectives of the fathers' involvement.

There were also limitations in Studies I and V. Although both mothers and fathers were included, there were more mothers than fathers. Although the goal was to include a wide perspective, one weakness may have been the inclusion of both first-time and experienced parents, as well as both Swedish and non-Swedish parents. These groups may have different experiences that were overlooked here. Although the use of an interpreter was allowed for interviewing a broader range of parents, individuals who participated through interpreters might have been limited in what they were able to share. Most of the participants recruited from an open lecture were self-selected and had higher educational levels than the average (all levels of education were represented). When using a convenience sample, a common type of selection sampling in qualitative studies, there is a risk of selection bias. However, it can work well for a particular clinical setting or specific organizations ¹⁰⁹.

The main strength in Studies II–IV was the large sample of parents and that both parents of the same child were included. The mothers and fathers participated to nearly the same extent, which also allowed examination of the parents in couples. Further, homogeneous couples, for whom the basic conditions were equal (i.e., level of education, parental experience, existence of a parental role model and SOC) were examined, with the intention of reducing any confounding factors (Study III). Furthermore, parents from eight different CHCs participated and thus reduced the risk of influence of individual nurses.

There were some limitations in Studies II–IV. A convenience sample was used, and therefore, the parents who did not respond could have biased the results in some direction. Participant bias is always an important issue to consider, especially in longitudinal studies ¹⁶⁸. It is possible that mothers and fathers who took the time to answer the questionnaires had fewer depressive symptoms and less parental stress, but more dyadic consensus than those who did not take the time to answer (Studies II and III). A limitation may be that data were collected from 2004 to 2008. However, the same parental leave policies are still valid in Sweden even if a slight increase in the number of parental leave days is seen to favour fathers ⁴⁸. A further limitation was that the dyadic consensus was measured 1 week after childbirth, which is a

sensitive time of life for most parents and could have affected their responses. Another limitation was that the printing error in the baseline questionnaire resulted in 96 couples (Study II) and 69 couples (Study III) being excluded from the analysis. The missing questionnaires were still scattered across the participants, resulting in couples with complete questionnaires in all the CHCs. In accordance with recommendations^{114, 169, 170} a cut-off of > 9 was used for the EPDS, despite the risk of more false positive cases compared with using a higher cut-off. EPDS is validated on men¹²⁵ although some studies mention concerns if the scale is to be used for screening minor depression^{51, 171}. The question about a parental role model (Studies III and IV) did not distinguish between good and bad role models. The question was worded so that the parents only responded to whether they had or did not have a role model. Because the participants were not randomly selected in Studies II–IV, the results cannot be generalized to contexts other than those described in this thesis.

Conclusion and clinical implications

This thesis found that mothers' needs were predominantly addressed in the antenatal services, but fathers were often 'invisible'. Expectant parents wanted their health care to include the father more and to focus on the whole family. After childbirth, more mothers than fathers experienced depressive symptoms and parental stress. Health professionals should be aware of the inequality in depressive symptoms and parental stress that exist between mothers and fathers, so that parents can be adequately prepared for parenthood. Proper attention should be given to both mothers and fathers. Resources, such as prevention programmes, should correspond to both mothers' and fathers' needs so that parents are able to support each other well in the parenting process. The gender competence of health professionals should be increased in this important area. Educational programmes in stress-coping strategies and interventions supporting the sense of coherence should be developed by addressing comprehensibility, manageability and meaningfulness.

Different factors affected depressive symptoms, parental stress and levels of dyadic consensus in parents. Health professionals should focus on the physiological, psychological, sociocultural, and developmental factors that can affect stress and stress reactions. To promote parents' health and family stability, health professionals should plan ways to prevent or detect depressive symptoms and stress, and develop interventions to provide support.

The goal of primary prevention should promote family wellness through stress prevention and reduction of risk factors and this could be done in parental education programmes where parents can meet other parents, as they suggested in this thesis. It is important not to preserve traditional gender norms, but instead to focus on every mother's and father's unique situation, their common needs, and their shared responsibility for their child.

Parental health care has changed and services today may fail to meet the needs of both expectant mothers and fathers and new mothers and fathers. Antenatal services should become more client-centred and inclusive of the father and consider the man as an asset in their efforts to serve the whole family. This may involve offering more customized individual support and peer support in groups. It is important to offer appropriate support to expectant parents and new parents. It seems that the professionals need to improve their gender competence and avoid older norms with only the mother and baby as the focus of care. They should have additional professional development training in a gender perspective to be able to provide psychological and emotional support to mothers and fathers during pregnancy and childbirth, and after childbirth. As a result, mothers and fathers, in turn, may better support each other during pregnancy and parenthood. It will be useful for midwives and other health professionals who

seek to integrate the partner throughout the pregnancy and childbirth, to benefit the future child and family.

Future studies

Not all questions have been answered in this thesis, and new questions have arisen. Further studies are needed to investigate:

- what fathers and mothers suggest to get fathers more involved during pregnancy and parenthood
- how expectant parents who do not live together handle their situation and, in particular, the involvement of fathers
- whether professionals at the ANC consider that it is important to involve the father during pregnancy and, if there are obstacles, what they are — and whether the professionals have the time they need to support both parents
- whether professionals at the CHC and Family Centres consider that the father is as important as the mother, and whether they have the time they need to support both parents
- what a role model comprises and the importance of role models in a gender perspective
- perceived dyadic consensus, depressive symptoms and parental stress over the longer term, in a gender perspective.

Svensk sammanfattning

(Summary in Swedish)

Ett av de viktigaste folkhälsomålen i Sverige är att stödja föräldrar i deras föräldraskap. I Sverige erbjuds kostnadsfritt föräldrastöd genom mödra- och barnvårdscentraler samt sjukhusvård tills barnet är 19 år. Föräldrar är inte alltid nöjda med det stöd som erbjuds och det finns kunskapsluckor om vilket stöd föräldrar efterfrågar. Pappans engagemang i föräldraskapet leder till positiva effekter, inte bara för barnet utan även för pappan själv och partnern. Det är inte ovanligt att föräldrar upplever stress och depressiva symtom, som kan påverka hela familjen negativt. Tidigare forskning har främst fokuserat på mammors upplevelser av graviditet och föräldraskap. Få studier har undersökt både mammor och pappors upplevelser, särskilt från samma par. Det behövs ökad kunskap om mammor och pappors upplevelse av föräldrastress och depressiva symtom under det tidiga föräldraskapet. Det ökar möjligheten att utveckla föräldrastöd från graviditet och under tidigt föräldraskap för att främja föräldrars och barns hälsa.

Avhandlingens titel är 'Journey from Pregnancy to Early Parenthood', 'Resa från Graviditet till Tidigt Föräldraskap'. Det övergripande syftet var att beskriva blivande föräldrars upplevda behov av stöd, pappors engagemang under graviditet och att undersöka mammor och pappors depressiva symtom samt föräldrastress i tidigt föräldraskap. Avhandlingen bygger på fem delstudier i vilka två har kvalitativ och tre kvantitativ studiedesign. Studie I och V baseras på intervjuer från regeringens uppdrag för föräldrastöd i Sverige 2008 'Föräldrastöd - en Vinst för Alla'. Studierna II–IV baseras på enkäter från projektet 'Barnhälsovård i Tiden' (BiT) i norra Västmanland 2004-2006.

Studie I Syftet var att beskriva blivande mammor och pappors upplevda behov av stöd under graviditet. Studien bygger på fyra fokusgrupper och 13 individuella intervjuer i vilka 22 blivande mammor och 13 blivande pappor deltog. Intervjuerna (n=17) analyserades med systematisk textkondensering enligt Malterud's beskrivning. De blivande föräldrarna beskrev ett brett spektrum av sociala stödbehov samt behov av psykologiskt och praktiskt stöd. De beskrev behov av att få dela sina erfarenheter med andra i samma situation. De blivande föräldrarna upplevde att hälso- och sjukvården gav medicinskt stöd, men de saknade psykologiskt och känslomässigt stöd. De blivande mammornas behov var mer tillgodosedda än pappornas. De blivande papporna kände sig stundtals osynliga i mötet med vårdpersonalen.

Studie II Syftet var att undersöka föräldrars nivå av självrapporterade depressiva symptom. Syftet var också att undersöka om mammor och pappors oenighet i parrelationen en vecka efter barnets födelse hade samband med depressiva symptom tre månader efter barnets födelse. En vecka efter barnets födelse svarade 305 par på en enkät innehållande bl.a. frågor om enighet/oenighet i parrelationen. Tre månader senare svarade 249 av dessa par på en enkät som bl.a. innehöll frågor om depressiva symptom. Bland föräldrarna var det 17% av mammorna och 9% av papporna som rapporterade depressiva symptom när barnet var tre månader. Mammor och pappor med depressiva symptom uppgav mindre enighet i parrelationen än mammor och pappor utan depressiva symptom, när det gällde 'Umgänge med släkt och vänner', 'Viktiga beslut' och 'Hushållsuppgifter'. Det fanns ett samband mellan oenighet i förhållandet en vecka efter barnets födelse och depressiva symptom tre månader efter barnets födelse.

Studie III Syftet var att undersöka och jämföra föräldrastress hos mammor och hos pappor i tidigt föräldraskap i relation till utbildningsnivå, tidigare barn, förekomst av förebild i sin föräldraroll och Antonovskys känsla av sammanhang. Syftet var också att undersöka enighet/oenighet i parrelationen i samband med föräldrastress inom paret. En vecka efter barnets födelse svarade 401 mammor och 396 pappor på en enkät innehållande bl.a. demografiska frågor, frågor om de haft någon förebild i sin föräldraroll och frågor om enighet/oenighet i parrelationen. Arton månader senare svarade 320 av dessa mammor och 315 av dessa pappor på en enkät innehållande frågor om föräldrastress och frågor om känsla av sammanhang. Frågorna om föräldrastress innehöll fem subdomäner: 'Inkompetens i föräldraskapet', 'Rollbegränsning', 'Social isolering', 'Relationsproblem make/make/sambo' och 'Hälsoproblem'.

Hälften av mammorna (52%) och 28% av papporna uppgav att de hade någon förebild i sin föräldraroll. Mammor med låg utbildning, avsaknad av förebild i sin mammaroll och låg känsla av sammanhang hade högre stress i 'Social isolering' och 'Relationsproblem make/sambo' än mammor med högre utbildning, med förebild i sin mammaroll och hög känsla av sammanhang. Mammor med låg känsla av sammanhang hade högre stress totalt och i alla subdomäner, jämfört med mammor med hög känsla av sammanhang. Pappor som inte hade någon förebild i sin papparoll hade högre stress i 'Social isolering' än pappor med förebild. Pappor med låg känsla av sammanhang uppgav högre stress än pappor med hög känsla av sammanhang, totalt och i alla subdomäner förutom 'Rollbegränsning'.

När det gällde enighet i parrelationen skattade mammorna högre enighet i relationen än papporna när det gällde 'Fritidssysselsättningar', 'Vänner', 'Strävande och mål i livet', 'Tid tillsammans' och 'Beslut angående karriär/personlig utveckling'. 'Hushållsuppgifter' var enda området där pappor uppgav högre enighet än mammor. Det fanns samband mellan upplevd föräldrastress och oenighet i relationen.

Studie IV Syftet var att undersöka upplevd nivå av föräldrastress när barnet var 18 månader samt eventuella skillnader mellan mammor och pappor i par. Detta undersöktes i relation till utbildningsnivå, tidigare barn, förekomst av förebild i föräldrarollen och känsla av sammanhang. Dessa frågor besvarades en vecka samt 18 månader efter barnets födelse.

Resultatet från 307 mammor och 301 pappor som svarade på frågor om föräldrastress visade att både mammorna och papporna rapporterade mest stress i 'Rollbegränsning'. Mammorna uppgav lägst stress i 'Social isolering' medan papporna uppgav lägst stress i 'Inkompetens i föräldraskapet'. Mammorna hade högre stress än papporna i 'Inkompetens i föräldraskapet', 'Rollbegränsning', 'Relationsproblem maka/make/sambo' och 'Hälsoproblem'. Däremot hade papporna högre stress i 'Social isolering' än mammorna.

Resultatet från de 284 paren, som svarade på såväl frågorna om föräldrastress och känsla av sammanhang, visade att mammorna skattade högre stress totalt än papporna. Mammor med universitetsutbildning uppgav högre stress än pappor med universitetsutbildning i 'Rollbegränsning'. Mammor som inte hade universitetsutbildning uppgav högre stress än pappor utan universitetsutbildning i 'Inkompetens i föräldraskapet', 'Rollbegränsning' och 'Relationsproblem maka/make/sambo'. Pappor som inte hade universitetsutbildning hade mer stress i 'Social isolering' än mammor utan universitetsutbildning.

Mammor med tidigare barn hade mer stress än papporna totalt och i 'Inkompetens i föräldraskapet', 'Rollbegränsning' samt 'Hälsoproblem'. Mammor utan tidigare barn hade mer stress i 'Rollbegränsning' och 'Relationsproblem maka/make/sambo' än pappor utan tidigare barn. Pappor med eller utan barn sedan tidigare hade mer stress än mammor i samma situation i 'Social isolering'.

Mammor med förebild upplevde mer stress än pappor med förebild, totalt och i 'Inkompetens i föräldraskapet' och 'Rollbegränsning'. Mammor utan förebild hade mer stress än pappor i 'Inkompetens i föräldraskapet', 'Rollbegränsning' samt 'Hälsoproblem'. Pappor utan förebild hade mer stress i 'Social isolering' än mammor utan förebild.

Mammor med hög känsla av sammanhang hade mer stress än pappor totalt och i 'Inkompetens i föräldraskapet', 'Rollbegränsning' samt 'Hälsoproblem'. Pappor med hög känsla av sammanhang hade mer stress i 'Social isolering' än mammor. Mammor med låg känsla av sammanhang hade mer stress än pappor i 'Rollbegränsning' och 'Relationsproblem maka/make/sambo'.

Studie V Syftet var att beskriva blivande mammors och pappors perspektiv på pappans engagemang under graviditet. I fyra fokusgrupper och 12 individuella intervjuer deltog 20 blivande mammor och 10 blivande pappor (samma intervjuer som i studie I, dock två mammor som exkluderades då de inte bodde tillsammans med pappan). Intervjuerna

(n=16) analyserades med kvalitativ innehållsanalys enligt Graneheim och Lundman.

Temat 'Paddla uppströms' framträdde som uttryck för det latent innehåll i intervjuerna och föräldrarnas beskrivning av pappans engagemang. Temat är en metafor för de blivande mammornas och pappornas perspektiv på pappans medverkan under graviditet. De blivande föräldrarna ville att pappan skulle vara involverad, men upplevde hinder för hans deltagande. Metaforen belyser hur pappan försöker göra framsteg i sitt kämpande mot olika hinder. Det går framåt, men kräver mycket energi. Trots att pappan hade en del oro för mamman och barnet under graviditeten var han glad för att graviditeten skulle få ett slut så han kunde träffa sitt barn. Temat byggdes upp från de fem underteman som beskrev att pappan ville och försökte: delta, vara förstående, lära om graviditet och förlossning, ha en lugnande inverkan och hitta ett balanserat liv. De blivande föräldrarna gav flera förbättringsförslag för att underlätta pappans engagemang vilket kan leda till att föräldrarnas behov av gemensamt deltagande i föräldraskapet bemöts på ett bättre sätt.

Slutsatser

Avhandlingen visar på brister i mödrahälsovårdens bemötande av blivande föräldrar och främst pappor. Resultatet visade att både blivande mammor och pappor vill att pappan ska vara mer delaktig i graviditeten. Den blivande pappan försökte med olika strategier vara delaktig men uppfattade inte alltid vad som förväntades av honom. Han stötte på hinder som han försökte navigera genom i den unika upplevelse som graviditeten innebar. Eftersom det bästa stödet för den blivande mamman var den blivande pappan och vice versa, ville de blivande föräldrarna att hälso- och sjukvården skulle inkludera den blivande pappan bättre och fokusera mer på hela familjen. Mödrahälsovården bör erbjuda mer skraddarsytt stöd både individuellt och i grupp. Utmaningen är att involvera båda föräldrarna genom god kommunikation och uppmuntran, så att föräldrar kan stödja varandra. Resultatet bidrar även till ökad kunskap om depressiva symtom och föräldrastress hos mammor och pappor samt vilka områden i relationen som kan påverka enigheten i parrelationen. Dessa kunskaper är användbara för yrkesverksamma inom mödra- och barnhälsovården, samt inom övriga instanser som möter barnfamiljer, såsom familjecentraler, öppna förskolor etc. Resultatet bidrar också till ökad kunskap om föräldrastress i paret. Det är viktigt att föräldrar görs medvetna om sitt eget ansvar för sin egen samt familjens hälsa. För att främja föräldrars hälsa och familjestabilitet bör faktorer som påverkar stress och stressreaktioner tas i beaktande. Hälso- och sjukvårdspersonal bör vara medveten om detta och aktivt stödja föräldrar, så att de kan vara tillräckligt förberedda för föräldraskapet och identifiera föräldrar med risk för depressiva symtom samt föräldrastress för att kunna ge adekvat stöd.

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