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Fear is in the air

Midwives´ perspectives of fear of childbirth and childbirth self-efficacy and fear of childbirth in nulliparous pregnant women

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"Only those who will risk going too far can possibly find out how far one can go"
TS Elliot

CONTENTS

ABSTRACT

Introduction: In Western countries, about one pregnant woman in five experiences a considerable fear of childbirth (FOC). Consequently FOC is an important topic for midwives, being pregnant women's main care givers. Also, although many aspects of FOC have been studied, almost no studies have into detail applied a theoretical frame of reference for studying pregnant women's expectations for their upcoming labour and delivery. Therefore, the theory of self-efficacy, here regarding pregnant women's belief in own capability to cope with labour and delivery, has been applied with the aim to better understand the phenomenon of FOC.

Aim: The overall aims of the thesis were to describe midwives´ perceptions and views on FOC and to expand the current knowledge about expectations for the forthcoming birth in pregnant nulliparous women in the context of FOC.

Method: Study I had a descriptive design. In total, 21 midwives distributed over four focus-groups, participated. Data were analysed by the phenomenographic approach. Studies II and III had cross sectional designs. Study II comprised 726 midwives, randomly selected from a national sample who completed a questionnaire that addressed the findings from Study I. Study III included 423 pregnant nulliparous women. FOC was measured using the Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ), self-efficacy by the Childbirth Self-Efficacy Inventory (CBSEI). Study IV had a descriptive interpretative design. Seventeen women with severe FOC were conveniently selected from the sample of Study III and individually interviewed. Content analyses, both deductive and inductive, were performed.

Results: Midwives' perceptions of FOC were related to four description categories, i.e. appearance of FOC, origins of FOC, consequences of FOC and midwifery care (Study I). The midwives thought that the prevalence of FOC has increased in the last ten years at the same time as FOC more often is brought up in the conversations both by women and midwives. There were some significant differences in midwives´ views in association with their

workplace: antenatal care clinics and labour wards. Midwives working at antenatal care clinics more commonly thought that they lacked sufficient knowledge to support women with severe FOC than midwives working in labour wards (Study II). In pregnant nulliparous women FOC and self-efficacy were found to be associated. The women with severe FOC were more likely to prefer to be delivered by a caesarean section (Study III). Women with severe FOC knew about strategies that are helpful for coping with labour, but they had a limited confidence in the usefulness of these strategies. In addition, they expressed confidence in strategies related to a defined childbirth self-efficacy (Study IV).

Conclusions: Swedish midwives regard severe FOC as a serious problem that influences pregnant women's view on the forthcoming labour and delivery. Midwives at antenatal care clinics, compared to colleagues working at labour wards, experience a greater need for training in care of pregnant women with severe FOC. Self-efficacy is a useful construct and the self-efficacy theory an applicable way of thinking in analysing fear of childbirth. The self-efficacy concept might be appropriate in midwives' care for women with severe FOC.

Key words: Anxiety; Childbirth; Content analysis; Fear; Focus-group interview; Midwives; Self-efficacy; Phenomenography; W-DEQ; CBSEI

LIST OF PAPERS

This thesis is based on the following papers, which will be referred to in the text by their roman numerals.

I. Salomonsson B, Wijma K, Alehagen S. Swedish midwives' perceptions of fear of childbirth. Midwifery (2010) 26; 327-337.

II. Salomonsson B, Alehagen S, Wijma K. Swedish midwives´ views of severe fear of childbirth. Sexual & Reproductive Healthcare 2 (2011) 153-159.

III. Salomonsson B, Gullberg MT, Alehagen S, Wijma K. Self-efficacy beliefs and fear of childbirth in nulliparous women. Submitted.

IV. Salomonsson B, Berterö C, Alehagen S. Self-efficacy in pregnant women with severe fear of childbirth. Resubmitted.

INTRODUCTION

Pregnancy and childbirth are parts of a biological process involving a series of predictable physiological phenomena and existential dimensions that take place in a social and cultural context. At the same time, this process is unpredictable since the particular course of an individual pregnancy is not known in advance. Pregnancy and childbirth are unique live events (Holmes & Rahe, 1967), meaning that they lead to a major life change and can be perceived as stressful. For the majority of women, childbirth is positive. However, for a considerable number, it is appraised as such a threatening or dangerous situation that they experience fear of childbirth (FOC).

FOC as a phenomenon has been studied for about 40 years, mostly in Australia, Scandinavia and Western Europe. FOC does not seem to have been studied in developing countries. This does not mean that FOC does not occur in such countries. In fact, in these countries, maternal and infant mortality is often a major problem (WHO, 2000), which could increase the likelihood of FOC. To date, studies on FOC have mainly focused on pregnant women, although recently, FOC in fathers has also received attention (Eriksson, 2007; Hanson, Hunter, Bormann, & Sobo, 2009). It has been suggested that self-efficacy (Bandura, 1977), referring here to the belief in one's own capacity to cope with childbirth, is associated with FOC (Lowe, 2000). However, it is not known what factors constitute self-efficacy among women with severe FOC.

In Western Europe and Australia, about 25% of pregnant women report troublesome FOC (Areskog, Uddenberg, & Kjessler, 1981; Fenwick, Gamble, Nathan, Bayes, & Hauck, 2009; Geissbuehler & Eberhard, 2002; Hall et al., 2009) and at least 6-10% suffer from severe FOC (Areskog et al., 1981; Geissbuehler & Eberhard, 2002; Spice, Jones, Hadjistavropoulos, Kowalyk, & Stewart, 2009; Waldenstrom, Hildingsson, & Ryding, 2006; Zar, Wijma, & Wijma, 2001). Severe FOC is thought to interfere significantly with daily routines, professional life, social activities and/or relationships (Areskog et al., 1981). A recent study has shown that the prevalence of troublesome as well as severe FOC has increased among pregnant Swedish women (Nieminen, Stephansson, & Ryding, 2009). For about 2% of pregnant women, FOC fulfils the criteria for a specific phobia according to Diagnostic and Statistical manual

of Mental disorders fourth edition (DSM IV) (Zar et al., 2001). Nulliparous pregnant women more often report a high level of FOC before birth than women who have previously given birth (Alehagen, Wijma, & Wijma, 2001; Haines, Pallant, Karlstrom, & Hildingsson, 2011; Nieminen et al., 2009; Nilsson, Lundgren, Karlstrom, & Hildingsson, 2012; Rouhe, Salmela-Aro, Gissler, Halmesmaki, & Saisto, 2011; Sjogren, 1997; Sluijs, Cleiren, Scherjon, & Wijma, 2012). After delivery, this difference seems to disappear (Fenwick et al., 2009).

In Sweden, care and supervision during uncomplicated pregnancy, labour, delivery and the postpartum period are managed by midwives. This implies that pregnant women and women in labour with FOC generally meet a midwife as their first contact in the maternal care system. The midwife is responsible for providing support and care with the aim of having a safe delivery involving an experience that is as positive as possible (ICM, 2011b). It can be assumed that their knowledge and experiences of FOC influence midwives´ interactions with and care of women with FOC. Thus, childbirth places demands on both women with FOC and their midwives. To date, FOC from midwives´ point of view has not been focused on in research. Therefore, it is important to investigate how midwives consider FOC and how they view their own role in the care of women experiencing FOC. Furthermore, it is important to know more about how women and especially women with severe FOC consider their own capacity to cope with labour and birth. On the one hand, this thesis explores midwives' perceptions and views of severe FOC; on the other hand, it focuses on the level of confidence of pregnant nulliparous women in their own capacity to cope with labour and the association of this variable with FOC.

BACKGROUND

Fear of childbirth

Emotions are complex phenomena as they are a synthesis of various components: the subjective experience of the emotion, internal bodily responses, thoughts and beliefs that accompany the emotion, facial expressions, reactions to the emotion and, finally, action tendencies. These components influence each other and are involved in the creation of an emotion (Nolen-Hoeksema, Fredrickson, Loftus, & Wagenaar, 2009). Whether or not a person experiences fear depends on the cognitive appraisal of a situation (Lazarus & Folkman, 1984). When a situation is appraised as dangerous or even life-threatening, the emotional reaction is fear (Smith & Ellsworth, 1985). Crucial to the appraisal of fear is the individual's self-efficacy judgment, that is, the perception of being able to perform successfully or not (Bandura, 1977). Fear and anxiety are normal but distressing emotional responses in situations where the individual appraises danger. The reaction is often categorized into state and trait anxiety. State anxiety is the emotional response in a special situation, with biological as well as psychological effects, while trait anxiety is defined as an individual´s general tendency to respond with anxiety in stressful situations (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1970).

Among the types of anxiety, FOC has been isolated as a domain of its own (Wijma, Wijma, & Zar, 1998). It has been suggested that FOC comprises both state and trait fear (Zar et al., 2001).

The degree of FOC exhibits a normal distribution in populations of pregnant women (Nieminen et al., 2009; Zar et al., 2001); that is, FOC follows a continuum from almost no fear to extreme fear. The degree of FOC is related to the extent of suffering and dysfunction that to varying degrees affect women's health before, during and after pregnancy (Areskog et al., 1981).

In this thesis, FOC is referred to in three ways. First, it is described as a phenomenon in patients met by midwives in their daily work. Second, severe FOC is defined as a fear that disturbs a woman in her daily life, her

professional work or social contacts and/or she suffers extensively from the FOC and/or the fear negatively influences her during labour and delivery and/or makes her ask for a caesarean section (Wijma, 2003). Third, psychometrically, severe FOC is operationalized by a pre-set total score of ≥ 85 (Ryding, Wijma, Wijma, & Rydhstrom, 1998; Zar et al., 2001) in the Wijma Expectancy/Experience Delivery Questionnaire, version A (W-DEQ v. A), a psychometric instrument that measures FOC (Wijma et al., 1998).

Risk factors for experiencing fear of childbirth

Some women appear to be at a greater risk of experiencing FOC than others. Socio-demographic characteristics such as low educational level (Laursen, Hedegaard, & Johansen, 2008), lack of a social network (Laursen et al., 2008; Saisto, Salmela-Aro, Nurmi, & Halmesmaki, 2001), dissatisfaction with their partner (Saisto et al., 2001), young age and unemployment (Laursen et al., 2008) have been reported to be associated with FOC. For some women, FOC is derived from having listened to horror stories about difficult pregnancies (Fisher, Hauck, & Fenwick, 2006; Melender, 2002).

Mental health problems are twice as common among women with FOC compared with un-fearful controls (Rouhe et al., 2011). Women with an anxiety disorder or depression also have a greater risk of experiencing FOC (Hall et al., 2009; Ryding, Wirfelt, Wangborg, Sjogren, & Edman, 2007; Storksen, Eberhard-Gran, Garthus-Niegel, & Eskild, 2012; Zar, Wijma, & Wijma, 2002). On the other hand, in those with an anxiety disorder as well as FOC, the FOC is not more intense than in women with only FOC (Zar et al., 2002). Sexual abuse and violence (Heimstad, Dahloe, Laache, Skogvoll, & Schei, 2006) and childhood abuse (Lukasse et al., 2010) are also associated with having severe FOC. A negative birth experience (Nilsson et al., 2012), a previous emergency caesarean section (Nieminen et al., 2009; Nilsson et al., 2012) or an instrumental delivery (Nieminen et al., 2009) have been found to be associated with FOC in the next pregnancy. A negative birth experience may cause even more severe fear in pregnant women than in those without birth experience (Nieminen et al., 2009).

Content of fear of childbirth

For most women, FOC has a focus. Largely, the content of FOC is related to one's own as well as the child´s wellbeing, the course of labour and delivery, and a lack of trust in the obstetrical staff (Fisher et al., 2006; Geissbuehler & Eberhard, 2002; Melender, 2002; Ryding, 1993; Saisto, Ylikorkala, & Halmesmaki, 1999; Sjogren, 1997). More precisely, the focus of a woman´s FOC can be as follows: intolerable pain, losing control of the situation, incapacity to manage, not being offered sufficient support, not being allowed to participate in decision-making, a prolonged labour, an instrumental delivery, that the baby gets stuck, death of the baby, perineal lacerations and even losing one´s own life (Eriksson, Westman, & Hamberg, 2006; Geissbuehler & Eberhard, 2002; Melender, 2002; Ryding, 1993; Saisto et al., 1999; Sercekus & Okumus, 2009; Sjogren, 1997). Some women find the whole situation terrifying and are not able to specify any focus for their FOC (Saisto et al., 1999).

Consequences of fear of childbirth

Fear of childbirth has consequences. Besides the suffering and the strain in daily life, women with FOC run an increased risk for physiological as well as psychological complications during pregnancy, labour and birth. An Australian study showed that insomnia and fatigue are more prevalent in pregnant women with FOC (Hall et al., 2009).

The management of pregnancy and delivery is demanding for women with FOC (Eriksson, Jansson, & Hamberg, 2006; Nilsson & Lundgren, 2009). Pregnant women with severe FOC may experience feelings of danger, being trapped and being on their own. They may also consider themselves as inferior mothers-to-be (Nilsson & Lundgren, 2009). The findings of a grounded theory study (Eriksson, Jansson, et al., 2006) indicate that, for women with FOC, talking about their FOC was difficult. Women had a diversity of reasons for this, such as that it might intensify the FOC, that they would not be taken seriously and that they thought that it was not a good idea to bring it up since there was nothing that could be done to help. Strategies to deal with FOC can be considered as more or less proactive. Evasion, that is, avoiding situations that trigger the fear, distracting oneself and even denying the presence of FOC have been identified as ways to deal with FOC. Furthermore, seeking help

from others and processing the fear are additional strategies practised by women with FOC (Eriksson, Jansson, et al., 2006).

Preference (Fuglenes, Aas, Botten, Oian, & Kristiansen, 2011; Hildingsson, Radestad, Rubertsson, & Waldenstrom, 2002; Karlstrom, Nystedt, Johansson, & Hildingsson, 2011; Kringeland, Daltveit, & Moller, 2009; Nieminen et al., 2009) or a request (Fenwick, Staff, Gamble, Creedy, & Bayes, 2010; Handelzalts et al., 2012; McCourt et al., 2007; Wiklund, Edman, & Andolf, 2007) for an elective caesarean section is often associated with FOC. Furthermore, studies have reported a higher prevalence of caesarean sections due to FOC in terms of both elective (Handelzalts et al., 2012; Ryding et al., 1998; Waldenstrom et al., 2006) and emergency ones (Laursen, Johansen, & Hedegaard, 2009), with the exception of one study that found associations between neither elective nor emergency caesarean sections and FOC (Johnson & Slade, 2002).

Women with FOC run an increased risk of suffering from a higher than usual level of fear during labour and the postpartum period (Alehagen, Wijma, & Wijma, 2006). They receive more medical pain relief during labour (Alehagen et al., 2001) and have an increased risk for a prolonged labour (Adams, Eberhard-Gran, & Eskild, 2012; Johnson & Slade, 2003; Laursen et al., 2009).

There is also an increased risk for a negative birth experience (Alder et al., 2011; Hall et al., 2009; Nilsson, Bondas, & Lundgren, 2010; Nilsson et al., 2012; Rijnders et al., 2008). A Dutch study reported that fear for one's own or one's baby's life was a trigger for negative recollections of the birth experience two years after the delivery (Rijnders et al., 2008).

Although several studies have shown that childbirth can cause post-traumatic stress (Bailham & Joseph, 2003; Olde, van der Hart, Kleber, & van Son, 2006), the significance of severe FOC as a predictor of post-traumatic stress has not been determined. Whereas in Sweden severe FOC was identified as an important risk factor for post-traumatic stress and depression after childbirth (Soderquist, Wijma, Thorbert, & Wijma, 2009; Soderquist, Wijma, & Wijma, 2006; Soderquist, Wijma, & Wijma, 2004), this was not found in a Canadian study (Fairbrother & Woody, 2007).

Treatment of fear of childbirth

At present, there is no generally accepted treatment for FOC. Psychoeducation (Saisto, Toivanen, Salmela-Aro, & Halmesmaki, 2006), psychotherapy (Sjogren, 1998) and crisis-oriented counselling (Nerum, Halvorsen, Sorlie, & Oian, 2006) have been tested, but no evidence for their usefulness has been shown. However, a decrease in elective caesarean section has been observed as a positive side effect of such treatments in FOC (Nerum et al., 2006; Saisto et al., 2006). At present, randomised control trials of cognitive behavioural Internet therapy (Nieminen, 2012), haptotherapy (Klabbers, 2012) and hypnosis (Howell, 2012) are underway.

In Sweden, most maternity care centres have formed FOC teams with the aim of minimising FOC and providing optimal conditions for the birth to be as positive an experience as possible. In these teams, midwives are the primary counsellors in cooperation with an obstetrician (Swedish association of obstericans and gynaecologists, 2004). However, there have been few studies evaluating the effect of these teams. It has not been shown that the assistance of these teams results in less frightening birth experiences or fewer symptoms of post-traumatic stress after birth (Ryding, Persson, Onell, & Kvist, 2003), but it has been found that the birth becomes a more positive experience than expected (Helk, Spilling, & Aarhus Smeby, 2008).

Self-efficacy

Self-efficacy includes perceptions of one's own behavioural, cognitive and emotional abilities to cope with future situations (Bandura, 1977). Self-efficacy makes a difference in how people think, motivate themselves and behave (Bandura, 1997; Williams, 1992) and is seen as a link between knowledge, skill and performance (Jones & Sheppard, 2011). Perceived self-efficacy is defined as "beliefs in one´s capabilities to organize and execute the courses of actions required to produce given attainments" (Bandura, 1997, p 3). Self-efficacy is the core concept in social cognitive theory. Social cognitive theory states that human behaviour is governed by the reciprocal causation between personal factors in the form of cognitive, affective and biological events (P), influences from the external environment (E) and behaviours (B) (Bandura, 1997)
(Figure 1).

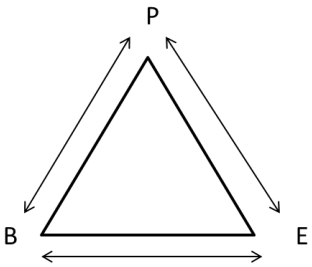

Figure 1. The triadic reciprocal causation in human behaviour
P = person, B = behaviour, E = environment (from Bandura, 1999).

An individual´s self-efficacy has two dimensions, outcome expectancy and efficacy expectancy, which mediate the relationship between personal factors and behaviour (Richard & Shea, 2011). Outcome expectancy stands for the belief that a given behaviour will lead to a given outcome, while efficacy expectancy refers to the belief in one's ability to carry out this behaviour. Efficacy expectations determine the amount of effort that people will expend and the length of time that they will persevere in aversive situations (Bandura, 1977). For example, a pregnant woman who is confident that she can relax her body to cope with labour pain (high efficacy expectancy and high outcome expectancy) will not, when in labour, give up on practising relaxation as easily as a woman with low efficacy expectancy. Alternatively, a woman who holds the belief that relaxing is helpful for coping (high outcome expectancy) but has serious doubts about having the capacity to relax (low efficacy expectancy) will give up trying to relax more readily.

An individual's self-efficacy has four origins: primary and most influential is the outcome of past experiences of mastering of a certain situation. Additional sources are vicarious experiences provided by others, verbal persuasion and emotional arousal (Bandura, 1977).

Three domains of self-efficacy have been distinguished: behavioural, cognitive and emotional. Behavioural self-efficacy refers to the original definition of self-efficacy, that is, an individual´s confidence in his or her own capacity to cope with a specific situation, while cognitive self-efficacy refers to perceptions to exercise control over one´s thoughts. Emotional self-efficacy is about belief in the ability to perform actions that influence one´s mood or emotional state (Maddux & Lewis, 1995).

There is no consensus about whether self-efficacy is exclusively situation-dependent (Bandura, 1997; Scherbaum, Cohen-Charash, & Kern, 2006) or whether it can be seen as a general trait, that is, involving perceptions of ability to perform across a variety of situations (Scherbaum et al., 2006). If self-efficacy is seen as situation-specific, a person can possess low self-efficacy in one situation and high self-efficacy in another, while general self-efficacy implies that a person tends to have the same level of self-efficacy, independent of the situation.

In this thesis, self-efficacy refers to the definition provided by Bandura and consequently is defined as being situation-dependent (Bandura, 1997).

Childbirth self-efficacy, that is, the belief in the capacity to cope with labour and birth, has been conceptualised by Lowe according to a number of stated behaviours belonging to one of seven domains: concentration, thinking, support, self-encouragement, control, motor/relaxation and breathing (Lowe, 1993).

Self-efficacy and reproductive health

The concept of self-efficacy has been applied in numerous fields related to reproductive health. In nulliparous women, higher levels of FOC (Lowe, 2000) as well as higher levels of anxiety (Beebe, Lee, Carrieri-Kohlman, & Humphreys, 2007) have been found to be associated with lower childbirth efficacy expectancy. Low self-efficacy and severe FOC have also been found to predict symptoms of post-traumatic stress disorder after giving birth (Soet, Brack, & DiIorio, 2003).

Childbirth self-efficacy is suggested to play a role in choosing an elective caesarean section. In women with a previous caesarean section, lower self-efficacy was associated with a wish for another caesarean section (Dilks & Beal, 1997). Efficacy expectancy has been identified as predicting mastery of labour pain (Larsen, O'Hara, Brewer, & Wenzel, 2001; Manning & Wright, 1983). An Australian study showed that women with higher self-efficacy expectancy regarding their ability to manage the pain of labour and delivery were less likely to request medication and tolerated pain longer before requesting medication (Manning & Wright, 1983). Furthermore, it has been

found that women with lower self-efficacy experience more labour pain (Stockman & Altmaier, 2001). However, Williams et al. found no relationship between self-efficacy in non-pharmacological pain relief strategies and the use of "NO2 & O2" as well as epidural analgesia (Williams, Povey, & White, 2008).

A prior positive birth experience has been identified as an indicator of higher childbirth self-efficacy (Drummond & Rickwood, 1997; Sinclair & O'Boyle, 1999). Moreover, high self-efficacy has been shown to be associated with higher satisfaction with the delivery (Berentson-Shaw, Scott, & Jose, 2009; Christiaens, Verhaeghe, & Bracke, 2008), with one's own performance and with the support of midwives and physicians (Christiaens et al., 2008). Self-efficacy has also been considered in the case of breastfeeding, showing that breastfeeding self-efficacy is the main factor that predicts the duration of breastfeeding in primiparous women (Baghurst et al., 2007; Blyth et al., 2002). Mothers with higher breastfeeding self-efficacy were more likely to be feeding their child exclusively by breastfeeding up to four months postpartum (Blyth et al., 2002).

Midwifery practice

In many countries around the world, the midwife is the key person in the care of women during pregnancy, labour and birth (The State of the World´s Midwifery, 2011). Midwives are considered as the most appropriate care providers to attend women and their partners during pregnancy, labour and postpartum (ICM, 2011a; WHO, 1996). Professional midwives work in cooperation with women and provide appropriate and individualized midwifery care (ICM, 2011a; Svenska Barnmorskeförbundet).

All nursing models comprise four central concepts: person, health, environment and nursing. In midwifery models, person is changed to women/family and nursing to midwifery. Besides these concepts, it is suggested that midwifery models should be complemented by a fifth concept, "a midwife's self-knowledge", since such knowledge is vital for using themselves in a therapeutic relationship and being able to avoid objectifying people (Bryar & Sinclair, 2011).

Two contrasting models are suggested to have an impact on midwifery practice: the medical model of pregnancy and pregnancy as a normal life

event. In the medical model, pregnancy is primarily seen as a potential pathological process that needs medical interventions, while in the model of pregnancy as a normal life event, it is anticipated to be normal and a time for individual growth (Bryar & Sinclair, 2011). In their daily work, midwives have to balance these two perspectives.

In Sweden, midwives are the primary caregivers when the pregnancy and birth are uncomplicated. Midwives are required to identify deviations from normal processes and, when childbirth becomes complicated, to report to and work in co-operation with obstetricians (Swedish association of obstetricans and gynaecologists, 2008; The National Board of Health and Welfare, 2006). Almost all pregnant women living in Sweden attend an antenatal care clinic and give birth at a hospital with access to advanced medical resources. During pregnancy, the woman meets a midwife, often the same one, eight to ten times (Swedish association of obstetricans and gynaecologists, 2008).

Overall, midwifery care involves at least two people: the midwife and the pregnant woman. The midwife-pregnant woman relationship can affect the quality of the birth experience. Whether the woman considers the midwife to be caring or uncaring (Halldorsdottir & Karlsdottir, 1996) can make the difference between a positive or a negative birth experience. The birth experience is known to be a factor that can contribute to increase or decrease FOC (Hildingsson, Nilsson, Karlstrom, & Lundgren, 2011). Support and a good pregnant woman-midwife relationship during labour are crucial for a positive childbirth experience (Lavender, Walkinshaw, & Walton, 1999; Waldenstrom, Borg, Olsson, Skold, & Wall, 1996). Individualized care, based on mutual trust, increases the possibilities for a positive interaction between the midwife and the woman in labour (Berg, Lundgren, Hermansson, & Wahlberg, 1996).

AIMS

The overall aims for the work presented in this thesis were to describe midwives′ perceptions and views of fear of childbirth (Studies I and II) and to expand the current knowledge about expectations for the forthcoming birth in pregnant nulliparous women in the context of fear of childbirth (Studies III and IV).

The specific aims were:

- To describe midwives' experiences and perceptions of women with FOC (Study I).
- To describe the views of Swedish midwives on severe FOC (Study II).
- To explore, in pregnant nulliparous women, how childbirth self-efficacy, that is, outcome expectancy and efficacy expectancy, was associated with FOC and how efficacy expectancy and FOC respectively were related to socio-demographic characteristics, mental problems and preference for a caesarean section (Study III).
- To apply and test the concept of self-efficacy on expectations for an upcoming birth in the context of severe FOC in pregnant nulliparous women (Study IV).

METHOD

Designs

It has been suggested that it is wise to use a variety of methods to gain a broader view of a research situation (Mingers, 2001). This thesis describes work with two sequential parts involving complementary methodological approaches (Mingers, 2001; Morgan, 1998). The project started with an interview study, with the purpose of obtaining a description of midwives' perceptions of FOC (I), and was followed by a national cross-sectional study to test the relevance of the findings from Study I in the daily work of midwives (II). Next, associations between self-efficacy and FOC among pregnant women were explored (III). Thereafter, an interview study, aimed at obtaining an understanding of childbirth self-efficacy among women with severe FOC, was conducted (IV). This variation of approaches has made it possible to enlarge and deepen the understanding of FOC from both midwives´ and pregnant nulliparous women's perspectives, as well as about self-efficacy in pregnant nulliparous women related to levels of FOC. An overview of the designs and methods of the four studies is shown in Table 1.

Table 1. Designs of the studies included in the thesis

Study	Design	Participants	Setting	Data collection	Analyses
I	Descriptive study	21 midwives	University hospital (1) Central county hospitals (2) County hospital (1)	Focus-group interviews Semi-structured interview guide	Phenomenographic analysis
II	Cross-sectional observation study	726 midwives	National sample	Questionnaire: Background and study-specific questions	Parametric and non-parametric statistical analyses
III	Cross-sectional observation study	423 pregnant women	A county in Southeast Sweden	Questionnaires: Background questions, W-DEQ[1] and CBSEI[2]	Parametric and non-parametric statistical analyses
IV	Descriptive interpretative study	19 pregnant women	A county in Southeast Sweden	Interviews Semi-structured interview guide	Qualitative content analyses – deductive and inductive

[1] Wijma Delivery Expectancy/Experience Questionnaire, version A; [2]Childbirth Self-efficacy Inventory

Samples and settings

In Study I, four focus-group interviews were conducted. In total, 49 midwives were invited to these interviews, in which 21 participated, all of whom had a minimum of two years of professional experience. Recruitment took place at four hospitals that provide varying levels of care: one university hospital, two central county hospitals and one county hospital, all located in Southeast Sweden. The midwives were distributed over four groups with four to six participants in each group. Background characteristics of the participants are shown in Table 2.

Table 2. Background characteristics of participants (n = 21) in Study I

	Median (min-max)
Age (years)	52 (27-63)
Professional experience (years)	19 (3-38)
Experience from antenatal care clinics (years)	6 (0-17)
Experience from delivery wards (years)	5 (0-30)
Experience from antenatal and postnatal wards (years)	5 (0-35)

In Study II, 1,000 midwives from a random Swedish national sample, all members of the Swedish Association of Midwives, were invited to participate in a questionnaire study. An inclusion criterion was a minimum of one year of professional experience from antenatal, delivery or postpartum care within the last five years. To increase the likelihood that as many as possible would fulfil this criterion, the midwives had to be born between 1947 and 1977. This was based on the assumption that it is more likely that a younger person has recently completed midwifery education, while older individuals may have retired from professional work. This limitation resulted in 4,898 midwives being eligible for recruitment. As a random sample, 1,000 midwives were sent a questionnaire. Subsequently, 834 questionnaires were returned, of which 726 fulfilled the criteria for the target group. A flow chart of the inclusion procedure is shown in Figure 2.

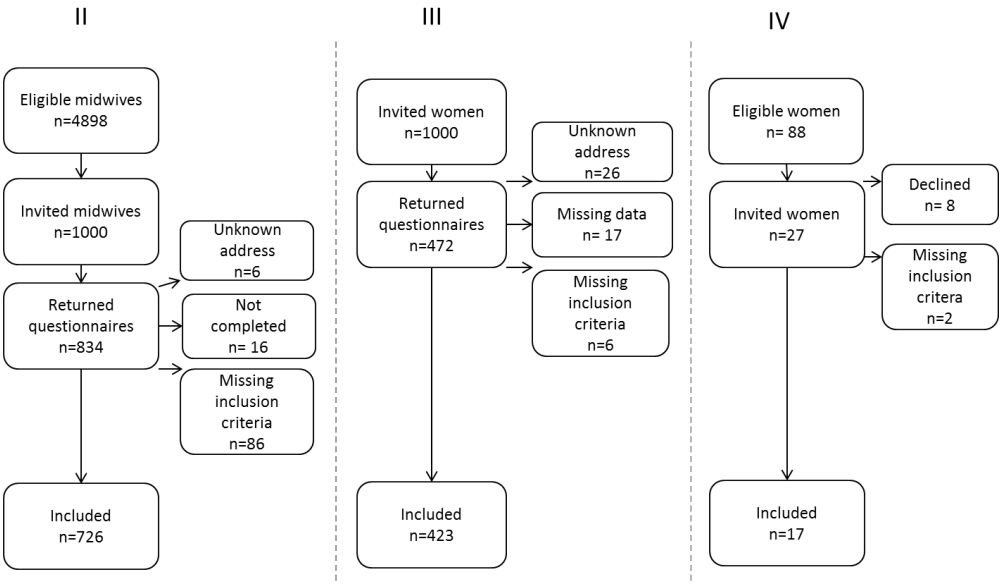

Figure 2. Flow charts for the inclusion of participants in Studies II, III and IV.

The participants were allocated to one of four groups associated with their workplace during the latest five years: antenatal care clinic (ACC), labour ward (LW), both ACC and LW, and neither ACC nor LW. Background characteristics of the participants in Study II are shown in Table 3.

Table 3. Background characteristics of participants (n = 726) in Study II

	Mean (SD)	**n**	**%**
Age (years)	47.8 (±7.8)		
< 50		360	50
≥ 50		364	50
Year of midwifery degree graduation			
1969-1989		348	48
1990-2007		376	52
Practice (years)	15.7 (±9.3)		
< 15		337	47
≥ 15		388	53
Main workplace in the last five years			
Antenatal care clinic (ACC)		188	26
Labour ward (LW)		287	40
Both ACC and LW		117	16
Neither ACC nor LW		134	18
Experience working with FOC teams[1]			
Yes		140	19
No		584	81

[1]Fear of childbirth teams

In Study III, 423 Swedish-speaking pregnant nulliparous women participated. All participants had passed a routine ultrasound examination in gestation weeks 18-20 without any foetal abnormalities and were legally adults (≥ 18 years). Name, address, telephone number and estimated date of delivery for 1,000 potential participants were received from three ultrasound clinics in Southeast Sweden. In the final sample 423 women were included. (Figure 2). Characteristics of the women are shown in Table 4.

Table 4. Background characteristics of participants (n = 423) in Study III

	Mean (±SD)	Md (Q1;Q3)	n	%
Age	29.0 (±4.5)			
Cohabitation with partner			413	98
Educational level				
Elementary school			11	3
High school			146	35
University			262	62
Occupational condition				
Employed/student			328	78
Unemployed/sick leave			91	22
Perceived health[1]		3.0 (3.0;4.0)		
Mental problems before pregnancy			121	29
Preference for caesarean section			21	5
W-DEQ[2] **version A**	68.5 (±22.4)			
CBSEI[3] **Outcome expectancy**	125.5 (±17.0)			
CBSEI[3] **Efficacy expectancy**	94.7 (±25.8)			

[1]Four-point scale: 1 = very bad, 4 = very good; [2]Wijma Expectancy/Experience Questionnaire; [3]Childbirth Self-efficacy Inventory

In Study IV, 19 pregnant nulliparous women were individually interviewed. Convenience sampling was carried out among the participants in Study III who fulfilled the criterion of W-DEQ score ≥ 85 in gestation weeks 25-26. In total, 27 women were invited to participate, among whom six declined without giving any reason and two stated that they did not have the time (Figure 2). The location for the interview was chosen by the women. The interviews were carried out between gestation weeks 32 and 38. Two of the women interviewed were later excluded due to misinterpretation of the instructions of W-DEQ version A, which had led to a total score ≥ 85. Characteristics of the women are shown in Table 5.

Table 5. Background characteristics of participants (n = 17) in Study IV

	n	Mean (SD)
Age (years)		
19-29	9	
30-38	8	
Cohabitation with partner		
Yes	17	
Educational level		
Elementary school	0	
High school	7	
University	10	
Occupational status		
Full-time	13	
Part-time	2	
Sick leave	1	
Unemployed	1	
Preference for caeserean section	4	
Mental health problems before pregnancy	5	
W-DEQ[1] version A		99.9 (±11.1)
CBSEI[2] Outcome expectancy		124.4 (±13.3)
CBSEI[2] Efficacy expectancy		72.5 (±40.2)

[1]Wijma Expectancy/Experience Questionnaire; [2]Childbirth Self-efficacy Inventory

Data collection

Study I

In Study I, data collection was carried out by means of focus-group interviews. Focus-group interviewing is a method for data collection (Morgan, 1996) that is useful for uncovering attitudes, perceptions and experiences (Krueger & Casey, 2000). In focus-group interviews, group interactions are used to produce data: participants influence each other in their joint discussion (Morgan, 1996). The sample size can vary depending on the topic and how involved the participants are. It has been suggested that six to eight participants is the ideal size. The questions used in a focus-group interview should be prepared to focus on the defined area and follow a particular order:

opening, introduction, transition, key and ending. The interviewer is called a moderator, which refers to the function of guiding and stimulating discussions by the participants rather than interviewing them. An assisting moderator is often present to take notes and take care of the environmental conditions (Krueger & Casey, 2000).

Focus-group interviews

Four focus-group interviews were conducted in 2004-2006 during a period of 18 months. The focus-group interviews were carried out in a conversational mode by the researcher as a moderator together with a co-researcher assisting by taking notes. The group discussions were conducted according to a question guide that focused on different aspects of FOC.
The questions were as follows:

- Describe your experiences of caring for women with FOC.
- FOC - what does it mean for you?
- What is your opinion of the consequences of FOC?
    - For the woman/couple/family.
    - For interaction with the midwife.
    - For society.
- What do you think of the midwife´s role/responsibility when meeting women with FOC?
    - Identifying women with FOC.
    - Caring for women with FOC.
- What do you think is suitable professional care for women with FOC?

The interviews were digitally recorded. Background data were documented after the discussion. Additionally, two statements about the experience of the group discussion were posed, which were responded to using a five-grade Likert-type scale ranging from "totally disagree" to "totally agree". The wording of the statements was as follows: "It was stimulating to discuss this in a group" and "I now have new ideas about FOC". Both statements gave a group median of 4 (min-max 3–5 and 2–5, respectively), which means that the participants found it positive to discuss the topic with other midwives.

Study II

Study II had a cross-sectional design. Data collection was carried out by means of a questionnaire specifically designed for this study.

Procedure

The midwives (n = 1,000) were sent a coded questionnaire by post in November 2007. The letter also contained a stamped addressed return envelope and a sheet including information about the study, including its aim, voluntary nature and confidentiality. Reminders were sent to non-responders three and eight weeks after the first mailing.

Questionnaire

The questionnaire was created by a research group on the basis of the findings of Study I, as well as clinical and scientific experiences of the members of the research group. The questionnaire was pre-tested on six midwives in terms of their understanding of it and its relevance. This resulted in no revision. The questionnaire comprised six questions addressing background characteristics and 32 statements about severe FOC. The statements could be answered using a scale with four alternatives, ranging from "totally disagree" to "totally agree". The statements were organized in three parts with statements directed to: a) all midwives, b) midwives with working experience from ACCs in the last five years and c) midwives with working experience from LWs in the last five years.

Study III

Study III had a cross-sectional design. Data collection was carried out by means of questionnaires during a period of one year, starting in April 2010.

Procedure

Coded questionnaires were sent out to potential participants in gestation weeks 25-26. Written information and a prepaid return envelope were enclosed. The information sheet contained information about the study, including its voluntary nature and confidentiality, as well as information stating that completion and return of the questionnaire were considered as the provision of consent to participate in the study as well as being eligible for a request for an individual interview (IV). A reminder was sent to non-responders two weeks after the first mailing.

Measurements

The W-DEQ v. A (Wijma et al., 1998), is a 33-item questionnaire that measures FOC on a six-point Likert-type scale, using a woman´s cognitive appraisal of an upcoming birth. The items consist of both negative (e.g. weak) and positive (e.g. proud) end points. The total score ranges from 0 to 165, the higher the total score, the greater the FOC.

The Childbirth Self-Efficacy Inventory (CBSEI) (Lowe, 1993) is, in its original form, a 62-item scale with four subscales measuring outcome expectancy and efficacy expectancy in relation to active labour (15+15 items) and to the second stage of labour (16+16 items). Participants respond on a ten-point Likert-type scale graded from 1 to 10; the higher the score, the higher the outcome expectancy and efficacy expectancy. In this study, we used a short form of CBSEI (Gao, Ip, & Sun, 2011) comprising two sub-scales, namely, outcome expectancy and efficacy expectancy for active labour, with 16 items each.

Background data concerning socio-demographic factors, perceived health, mental problems and preferred mode of delivery (vaginal birth or caesarean section) were collected by means of a separate questionnaire.

Study IV

In Study IV, individual interviews were performed for the data collection.

Procedure

Those women who had participated in Study III and fulfilled the criterion for severe FOC, namely, a total score ≥ 85 in W-DEQ version A, were sent an invitation in gestation weeks 30-34. The letter contained information related to the recruitment for Study III, completed with repeated information about the voluntary nature of the study and its confidentiality, as well as indicating that they would be contacted by telephone for an invitation to take part in the study. Verbal information was given by telephone as well as before beginning the interview. The interviews were recorded digitally after permission was granted by each woman. Data collection took place from July 2010 to April 2011.

Interviews

A semi-structured interview guide was constructed, focusing on expectations for the upcoming birth. Two pilot interviews resulted in minor revisions. All interviews were performed by the researcher. The interviews started with some small talk, after which the opening question was presented: "Can you tell me about your upcoming birth?" After that, the women were presented with three scenarios, one by one: the start of labour, the active phase of the first stage of labour and the birth of the child. The women were encouraged to visualize each situation and respond to the following questions: "What will happen?" "How will you think?" "What will you feel?" "What will you do?" Probing, exploratory questions were asked. The interviews lasted from 29 to 82 minutes (median 50).

Data analysis

Studies I and IV

All interviews were transcribed verbatim. Analyses were carried out by means of a phenomenographic approach (I) and qualitative content analysis, deductively as well as inductively (VI).

Phenomenographic analysis

In Study I, a phenomenographic research approach was applied. Phenomenography has its roots in pedagogical research with the aim of studying human thinking in order to understand, analyse and describe phenomena in the world around us (Marton, 1981) . The assumption for this is that human thinking has a content that can be labelled and categorized (Wenestam, 2000). Individuals understand and experience phenomena in the world around them differently, leading to variations in perceptions of phenomena. The purpose of phenomenographic research is to discover these variations in order to obtain a better understanding of a particular phenomenon. A perception, often referred to as a conception (Pang, 2003), has two dimensions: what and how. The phenomenographic research approach has a second-order perspective, that is, it describes how the world is perceived, in contrast to the first-order perspective that aims to describe how the world in fact is (Marton, 1994). In the analytical process, the researcher is supposed to put his/her pre-understanding about the phenomenon aside and focus on the similarities and differences of the perceptions that appear in the data (Barnard, McCosker, & Gerber, 1999; Marton, 1994; Sjostrom & Dahlgren, 2002). The outcome of the analysis comprises categories of description of the phenomenon in question, reflecting the meaning of the data (Barnard et al., 1999).

In this study, the analysis comprised certain consecutive steps (Sjostrom & Dahlgren, 2002). In the first step, "familiarizing", all transcripts were read through to obtain an overview of the whole content. Next, identification and "compilations" of answers from all focus groups related to different questions were carried out. This was followed by "condensation" of central parts of the answers. Thereafter, preliminary grouping of similar answers was carried out. In the next step, comparisons between the groups (categories) and borders between them were established. Subsequently, the categories were named and finally a contrastive comparison of the categories was undertaken. The analysis was carried out by the researcher in close co-operation with a co-researcher.

Qualitative content analysis

In Study IV, content analysis was applied to analyse the data. Content analysis is a research method to analyse the content of text data (Hsieh & Shannon, 2005; Polit & Beck, 2004), and it can be quantitative or qualitative. Quantitative content analysis focuses on counting frequencies of words or types of content, while the qualitative branch focuses on the meanings of the content (Hsieh & Shannon, 2005). Qualitative content analysis is a systematic process comprising the identification, coding and categorization of patterns in empirical material. The analysis can be carried out according to two approaches: inductive or deductive (Patton, 2002). In the inductive approach, the findings emerge out of the data. In the deductive approach, the data are analysed according to an existing framework (Hsieh & Shannon, 2005; Mayring, 2000; Patton, 2002) with the goal of validating or extending conceptually a theoretical framework or theory (Hsieh & Shannon, 2005).

In this study, the analysis started with the deductive approach (Mayring, 2000). The matrix used was based on the seven behavioural domains of childbirth self-efficacy, as conceptualized in the CBSEI. These seven domains are concentration, thinking, support, motor/relaxation, self-encouragement, control and breathing. First, the transcripts were read through and statements that expressed expectations for the upcoming birth were identified. Thereafter (step two), the statements were scrutinized and sorted to the appropriate domain of the matrix. Those statements that did not match any of the domains were placed in an additional cluster labelled "miscellaneous" and later analysed according to the inductive approach. In the third step, the content of each statement was further analysed and components were revealed. Next (step four), dimensions of outcome expectancy and efficacy expectancy of each component were identified.

In the inductive analysis, the statements in the cluster "miscellaneous" were reread. The nuances of content were underlined. The underlined phrases were sorted according to meaning and subsequently expanded and subdivided. The analysis resulted in five defined sub-domains of childbirth self-efficacy.

Studies II and III

Statistical analyses

Statistical analyses were performed using SPSS version 15 (II) and version 20 (III).

Missing values in W-DEQ and CBSEI were replaced by the mean of the individual´s remaining items (Shrive et al., 2006), if at least 28 items on the W-DEQ and at least 14 items per subscale of CBSEI had been completed. Those with more missing values were not included in the analyses.

For the statistical analysis, participants were divided into groups.

In Study II, participants were categorized into four sub-groups based on workplace during the latest five years: the ACC group, the LW group, the both ACC and LW group and the neither ACC nor LW group.

In Study III, two grouping procedures were carried out. Two groups, the "mild to moderate FOC" and the "severe FOC group", were created on the basis of the W-DEQ total score. The cut-off score for the partition was set to ≥ 85 in line with previous research (Ryding et al., 1998; Zar et al., 2001). Three groups were constituted using the quartile values of the total score on the efficacy expectancy subscale of CBSEI: the "low efficacy expectancy" group (first quarter), the "moderate efficacy expectancy" group (second and third quarter) and the "high efficacy expectancy" group (fourth quarter). The "moderate efficacy expectancy" group was excluded from the analyses in order to differentiate more clearly between lower and higher efficacy expectancy levels.

Descriptive statistics were used for presentation of absolute and relative frequencies, mean, standard deviation, confidence interval (II, III), median and interquartile range (III).

Comparisons between two groups were tested by Pearson's Chi-square test and Fischer´s exact test for small samples for categorical variables (III), Mann-Whitney's U-test for ordinal variables (II, III) and Student´s t-test for continuous variables (III). Differences between more than two groups (II) were

tested by the Kruskal-Wallis test in cases of data on an ordinal level and, when the difference was significant, Mann-Whitney's U-test was applied. One-way ANOVA was used to test variances in age and length of clinical practice with Bonferroni correction as a post hoc test (II). Wilcoxon's signed rank test was used for testing pairwise differences (II). Differences in views between the ACC group and the LW group were evaluated using odds ratio and 95% confidence interval (II). In all the other analyses, the significance level was set to 0.01 in order to avoid a possible mass significance problem (II, III).

Correlations were analysed with Spearman's rho (III).

Three binary logistic regression analyses with the Enter method were performed (Field, 2009) (II, III). In Study II, the purpose was to explore how workplace, number of years of clinical practice and experience of working in a "fear of childbirth team" contributed to the views of severe FOC among the midwives. In Study III, two analyses were performed. One was carried out with the aim of investigating how socio-demographic characteristics, perceived health, mental problems before pregnancy, preference for a caesarean section, FOC and outcome efficacy (independent variables) contributed to efficacy expectancy, that is, low versus high efficacy expectancy (dependent variable). In the second analysis, the dependent variable was FOC, that is, mild to moderate FOC versus severe FOC, with the same independent variables as in the first analysis, but with FOC replacing efficacy expectancy.

Ethical considerations

All studies were carried out in accordance with the Declaration of Helsinki (WMA, 2008). The Regional Ethical Review Board of Linköping approved Studies III and IV, Record No. M 197/06. For Studies I and II, according to Swedish law, there was no need for ethical approval. Permission to contact the participating clinics in order to obtain the names and addresses of midwives (I) and pregnant women (II) was given by the heads of the participating clinics.

Participants received written (I-IV) and verbal information (I, IV) about the actual study before the decision to participate (CODEX). The information underlined that participation was voluntary and that confidentiality was

guaranteed (I-IV). Verbal informed consent was provided in Studies I and IV. Completion and return of the questionnaires were considered as the provision of informed consent in Studies II, III and IV. Participants were assured that they could withdraw from the study at any time without giving a reason. Furthermore, participants were assured that participation or lack thereof would not influence their antenatal care (III, IV).

All interviews were carried out by the researcher (I, IV), in Study I assisted by a moderator, who was also a midwife. Neither of these interviewers worked at any of the clinics at the time of data collection (I). In Study III, the interviewer had no relationship with any of the interviewees before the data collection. Fear was not explicitly mentioned at recruitment or in the interviews by the interviewer, but all interviewees more or less explicitly referred to their FOC in their narratives. After each interview, reflections about the topics discussed as well as the interview situation were talked over in order to identify any urgent need of support. Before parting, information about the time of the next scheduled visit to an antenatal care clinic was requested. Although the informants were primarily encouraged to contact their regular midwife, if in need of urgent support, they were also allowed to contact the interviewer.

Participants were assigned a code number (II, III). Two code lists were established, including name and postal address (II-III) and estimated date of delivery and telephone number (III). The lists were stored on a USB memory stick and kept safely in a locked container separate from the questionnaires.

Validity and reliability

In order to assess the quality of studies, the terms validity and reliability are used. However, the criteria and terminology differ between these terms according to the research context (Patton, 2002; Polit & Beck, 2004; Silverman, 2006; Steinke, 2004). In phenomenographic research, reliability refers to what degree the result is understood by other researchers (Marton, 1994). Phenomenographic analysis is a procedure of discovery, which means that it does not have to be replicable, but the revealed outcome space should be communicated in such a way that it is understood by other researchers. The description categories are to be recognisable in the data by other researchers with a reasonable degree of agreement, which means, according to Marton, that two researchers agree in at least two-thirds of cases (Marton, 1994). In

Study I, the analysis was systematically conducted according to consecutive steps (Sjostrom & Dahlgren, 2002). The analyses were carried out by the researcher in close co-operation with a co-researcher. Finally, the outcome space was identified by a third researcher.

In Studies II and III, validity refers to whether a questionnaire or instrument measures what it is supposed to measure. Reliability refers to the degree of accuracy and consistency of the information obtained (Polit & Beck, 2004).

In Study II, the questionnaire used was created on the basis of the findings of Study I, complemented with expert knowledge within the research group. This process to some degree assured content validity. Face validity was addressed by letting six midwives complete the questionnaire and make comments. The statements that made up the questionnaire were considered as relevant; thus, no revision was undertaken. Reliability was addressed by including a definition of severe FOC. Each statement in the questionnaire included the phrase "severe FOC", with the intention of ensuring that severe FOC was equally judged in each statement.

In Study III, data were collected by two psychometric measurements, W-DEQ version A, measuring FOC, and CBSEI, measuring childbirth self-efficacy. W-DEQ version A has shown good construct validity, internal consistency (0.89) and split-half reliability (0.87) in nulliparous women (Wijma et al., 1998). It has also shown good specificity and sensitivity (Zar, 2001). In this study, the reliability, concerning internal consistency and estimated using Cronbach´s alpha coefficient, was 0.92. After receiving permission to use CBSEI, the items were translated from English into Swedish and then back-translated (Streiner & Norman, 2008). The translation into Swedish was carried out by the research team. The back translation was carried out independently by two individuals who were fluent in both languages. The final wordings of the CBSEI were scrutinized by four independent researchers, none being midwives and all having given birth, who found the measurement easy to understand. The original CBSEI has shown high internal consistency in several studies (0.85-0.96) (Cunqueiro, Comeche, & Docampo, 2009; Drummond & Rickwood, 1997; Ip, Chan, & Chien, 2005; Lowe, 1993; Sinclair & O'Boyle, 1999). The short form of CBSEI used in this study has demonstrated high internal consistency for outcome expectancy (0.91), efficacy expectancy (0.94) and test re-test reliability (0.86 and 0.87) (Gao et al., 2011). In this study, the Cronbach´s alpha

coefficient was 0.83 for the outcome expectancy sub-scale and 0.92 for the efficacy expectancy sub-scale.

In Study IV, reliability was related to the degree to which the data analysis can be replicated (Krippendorff, 2004; Mayring, 2000). Therefore, all the steps in the analysis were carefully described. Validity was addressed by structural and sampling validity (Krippendorff, 2004). Structural validity concerns how well the matrix for analysis reflects the concept to be studied. In this study, the domains of CBSEI, which were systematically identified in the development of CBESI (Lowe, 1993), made up the matrix. Sampling validity refers to how well the studied phenomenon is represented in the sample (Krippendorff, 2004). The sample consisted of nulliparous women only, meaning that the findings were not biased by a previous birth experience, neither a positive nor a negative one. Furthermore, objective measurement to ensure that the informant fulfilled the criteria for severe FOC was used.

RESULTS

Fear of childbirth - the midwives' perspective - main findings of Study I and Study II

Appearances of FOC

According to the participants, FOC is a continuum and it is normal to experience some fear when facing childbirth, especially for nulliparous women. However, some women experience excessive FOC. This severe FOC was described as the worst thing that can happen to a woman during her pregnancy and occupies her mind all the time (I). FOC can be expressed in several ways, such as being embedded in other fears, for example, blood or injection phobias (I, II); however, in Study II, 66% of the midwives stated that severe FOC is a phobia of its own (II). FOC was described as a modern phenomenon (I) with an increasing prevalence (I, II). It was suggested that this could be due to a greater awareness about FOC among midwives, in addition to the fact that pregnant women are more often willing to bring up FOC in their contacts with midwives (I, II). Sixty-seven per cent of all the midwives agreed that there had been an increase in the prevalence of severe FOC over the past ten years (II). The midwives at LW were more likely to agree about this increased prevalence than midwives at ACC (OR 0.52, 95% CI 0.34-0.79; p = 0.002) (II). A further explanation was the increased accessibility of information over the Internet, among others (I). The influence of this factor was agreed with by over one-third of midwives (42%), but the midwives at LW were more likely to agree (OR 0.66, 95% CI 0.40-0.89; p = 0.01) (II). One-fifth of the midwives thought that FOC is more common among nulliparous women. This opinion was more common among the midwives not working at an ACC and LW (p = 0.005) (II).

Origins of FOC

In Study I, the origins of FOC were described. According to the participating midwives, for most women with FOC, there is a clear cause of it, but for some, the origin of their FOC is unknown. One of the causes described was distressing events earlier in life, for example, previous traumatic birth experiences or a history of physical violence and sexual abuse. Horror stories about childbirth can themselves cause FOC, but can also intensify existing FOC. FOC can be associated with the labour process and its outcome, including components such as losing control, being left alone, pain, birth of an unhealthy baby and lacerations. Furthermore, FOC can be related to the anticipated parenthood.

Consequences of FOC

According to the participating midwives, FOC affects life before, during and after childbirth (I). For some women, the pregnancy as well as labour and birth become complicated (I). FOC can take up all of a woman's attention during pregnancy, with consequences such as missing the joy of being pregnant, not attending childbirth education and having a strained relationship with one's partner (I). These together make up risk factors for an unsatisfactory preparation for childbirth and parenthood. One sign of this is a request for a caesarean section (I), which, according to the vast majority (95%) of midwives at LW, is not preferable (II). FOC was suggested to influence the attachment between mother and child negatively, to complicate breastfeeding (I) and even to constitute a trigger for mental illness (I).

FOC was described as resource-demanding in terms of both the midwives' working conditions and economic costs (I). Longer and more frequent antenatal visits, as well as more caesarean sections, were examples of reasons for such higher costs. At an ACC, it can be time-consuming to identify as well as support women with FOC; at an LW, a need for continuous support during labour and delivery makes it difficult to take care of more than one woman at a time (I). On the other hand, when a pregnant woman with FOC also visits an FOC team, less time is needed at the ACC (I).

Caring for women with FOC affects midwives in different ways. Most of the midwives (77%) who worked at an ACC or LW felt capable and several (55%) even felt stimulated when meeting pregnant women or women in labour with severe FOC. Almost no women (3%) wished to avoid caring for them (II). To care for women with FOC can be straining (I) and for a minority (2%) (II), can even be annoying (I, II). A birth plan was regarded as helpful for women with FOC (I, II), but it can also be demanding to fulfil the expectations and wishes expressed in it, especially if the plan is very detailed (I).

FOC and midwifery care

According to the perceptions of the midwives, midwifery care in the context of FOC comprises assessment, preparation for childbirth, support and a postpartum follow up (I). Sixty-five per cent of the midwives working at an LW, compared with 38% of the midwives at an ACC, stated they had sufficient knowledge to care for women with severe FOC (OR 0.34, 95% CI 0.23-0.50; $p < 0.001$) (II). Furthermore, experiences from working in an FOC team and long clinical practice were positively associated with the view of having sufficient knowledge.

One-quarter (24%) of the midwives at an LW, compared with 65% of the midwives at an ACC, considered that women with severe FOC ought to be cared for by midwives with special training in dealing with FOC (OR 5.14, 95% CI 3.44-7.70; $p < 0.001$). A minority (17%) thought that women with severe FOC need treatment by a trained psychotherapist (II).

Almost all (97%) of the midwives underlined the significance of FOC teams and 66% considered that visiting an FOC team decreases severe FOC. The majority (88.8%) of midwives at an ACC held that pregnant women with severe FOC should be referred to an FOC team (II).

Ninety-five per cent of the midwives at an ACC, compared with 69% of those working at an LW, considered that identifying severe FOC was their responsibility (OR 9.78, 95% CI 4.79-20.00; $p < 0.001$) (II). FOC is not always explicitly mentioned, and is instead sometimes embedded in various behaviours that are not automatically identified as signs of FOC (I). However, the majority of midwives at an ACC (77%) were confident of their own capacity to recognise severe FOC (II).

The ability to perceive intuitively when a woman is suffering from severe FOC was agreed with by a significantly larger proportion of the midwives at an LW (65%) compared with those (34%) working at an ACC (OR 0.36, 95% CI 0.24-0.53; $p < 0.001$) (II).

Care needs to be individualized since FOC has various causes and expressions (I). The woman must be given enough time to process her fear and should also be supported by an available, understanding and empathic midwife (I). It is an advantage if, during the course of pregnancy and labour, the woman is cared for by the same midwife or midwifery team (I). Preparation for labour and delivery was described as helpful (I). Childbirth education and a visit to a labour ward before birth were seen as essential, since knowledge about the process of pregnancy and labour, as well as practical routines, was supposed to assuage their fears (I). The majority (89%) of the midwives at an ACC agreed that an individual visit should be offered, but only slightly over one-fifth (22%) stated that individual childbirth education is needed (II). Helping the pregnant woman to think of the baby, teaching relaxation techniques (I) and encouraging the woman to write a birth plan were considered to be useful (I, II). Women with fear need support from a companion in birth as well as practical support, especially in the postpartum period (I). The majority (91%) of midwives working at an LW held the view that women with severe FOC primarily need support from a midwife, and almost as many (88%) stated that continuous support during labour ought to be offered to these women. Ninety-five per cent disagreed that women with severe FOC should be delivered by caesarean section. A planned vaginal delivery was seen as preferable by nearly 40% of the midwives, and almost one-quarter (23%) considered that women with severe FOC first and foremost need pain relief during labour (II).

A postpartum follow up was described as central for women with FOC because recalling the birth experience helps them to cope with the event (I).

Workplace turns out to be the main variable that significantly explains differences in midwives' views of severe FOC (Table 6). The midwives working at an LW, with experience from an FOC team and with longer clinical practice were more likely to consider that they have sufficient knowledge. Furthermore, longer clinical practice was associated with being more comfortable in meetings with women with severe FOC, while experience from

an FOC team was associated with a belief that midwives with special training ought to be the ones who carry out the care of these women (II).

Table 6. Logistic regression analysis with years of practice, experience from a fear of childbirth (FOC) team and place of work as predictors and midwives' views as a dependent variable

Midwives' views (dependent variable) (disagree = 0, agree = 1)	**Years of practice (continuous data) OR (95% CI)**	**FOC team (no = 0, yes = 1) OR (95% CI)**	**Workplace (LW = 0, ACC = 1) OR (95% CI)**	**R^2**
The availability of information, for example, from mass media and the Internet, has led to an increase in the prevalence of severe FOC	1.00 (0.98-1.02)	0.66 (0.40-1.09)	**0.60 (0.40-0.89)****	0.24
During the past ten years, the prevalence of severe FOC has increased	1.00 (0.98-1.02)	0.70 (0.42-1.16)	**0.52 (0.34-0.79)****	0.032
It is my responsibility as a midwife to identify severe FOC in pregnant women and women in delivery	1.00 (0.98-1.03)	1.09 (0.61-1.94)	**9.70 (4.63-20.27)*****	0.19
During pregnancy and in delivery, women with severe FOC should be cared for by midwives with special training in dealing with FOC	0.98 (0.96-1.00)	**1.97 (1.15-3.39) ****	**6.43 (4.07-10.16) *****	0.20
I have sufficient knowledge required to support pregnant women and women in delivery who have severe FOC	**1.05 (1.02-1.07)*****	**2.26 (1.29-3.96) ****	**0.27 (0.17-0.42) *****	0.17
I intuitively sense if a woman, pregnant or in delivery, has severe FOC, even if she does not express it	0.87 (0.97-1.01)	1.29 (0.78-2.15)	**0.38 (0.25-0.58) *****	0.09
I do not feel adequate meeting women, pregnant or in delivery, having severe FOC	**0.94 (0.91-0.98)*****	0.88 (0.37-2.07)	**3.68 (1.95-6.95) *****	0.09
To work with women with severe FOC, pregnant or in delivery, requires continuous professional supervision	1.00 (0.98-1.03)	1.66 (0.93-2.96)	**2.10 (1.30-3.37****	0.04

Note: R^2 = Nagelkerke's R-Squared, **p < 0.01, *** p < 0.001

Self-efficacy and fear of childbirth - main findings of Study III and Study IV

Fear of childbirth

Among the 423 women, 21% (n = 88) fulfilled the criteria of severe FOC, that is, W-DEQ total score ≥ 85 (III). These women had a lower level of education ($p = 0.001$), were to a greater extent unemployed or on sick leave ($p = 0.008$), and had more often sought help because of mental problems during their lives ($p = 0.004$). A minority of all women (5%) had a preference for a caesarean section, but a larger proportion (16%) ($p < 0.001$) of such women were found in the severe FOC group (III).

Self-efficacy

Outcome expectancy and efficacy expectancy were positively correlated. The level of outcome expectancy was higher than the level of efficacy expectancy ($p < 0.001$). A larger proportion of women with low efficacy expectancy had sought help because of mental problems ($p = 0.007$) and reported lower perceived health ($p < 0.001$) (III).

Fear of childbirth and self-efficacy

Efficacy expectancy was significantly associated with outcome expectancy and with FOC. Women with severe FOC were more likely to have a low level of efficacy expectancy (OR 0.98, 99% CI 0.96-0.99; $p < 0.001$). Slightly more than half (52%) of the women with severe FOC were found in the low efficacy expectancy group, while about one-fifth (19%) qualified for the high efficacy expectancy group. Preference for caesarean section was associated with severe FOC, but no such correlation was found with low efficacy expectancy (III) (Table 7).

Table 7. Logistic regression models of childbirth self-efficacy expectancy and severe fear of childbirth

	B	Efficacy expectancy OR (99% CI) n = 218	B	Severe fear of childbirth OR (99% CI) n = 423
Outcome expectancy	0.075	1.08 (1.04-1.11)***	-0.002	1.00 (0.98-1.02)
Efficacy expectancy			-0.024	0.9 (0.962-0.99) ***
Fear of childbirth W-DEQ[1]	-0.032	0.97 (0.95-0.99) ***		
Preference for caesarean section	0.336	1.40 (0.13-15.61)	1.899	6.68(1.72-25.97) ***

Note: *** $p < 0.001$

[1]Wijma Expectancy/Experience Questionnaire

Six of the seven domains that comprise CBSEI, namely, concentration, support, control, motor/relaxation, self-encouragement and breathing, were identified in the narratives of women with severe FOC (IV). "Thinking" was the domain not found. Additionally, five defined sub-domains of self-efficacy appeared, namely, "guidance", "the body controls", "professionals' control" and "fatalism". The content of identified and defined childbirth self-efficacy is illustrated in Figure 3. Several behaviours related to the domains of CBSEI were identified. Two levels of outcome efficacy emerged: "might be of help" and "will be of help". The distributions of outcome expectancy statements are shown in Table 8. Confidence in the ability to perform the different behaviours, that is, efficacy expectancy, varied from "not possible" to "will be carried out", with most statements related to "I will try". The distributions of efficacy expectancy statements (IV) are shown in Table 9. The sub-domains were characterized by beliefs in the body's capacity and signals, and external circumstances such as guidance of and reliance on professionals. "Fatalism" was an expression of resignation, but at the same time, this mediated some confidence in that parturition is possible to manage (IV) (Figure 3).

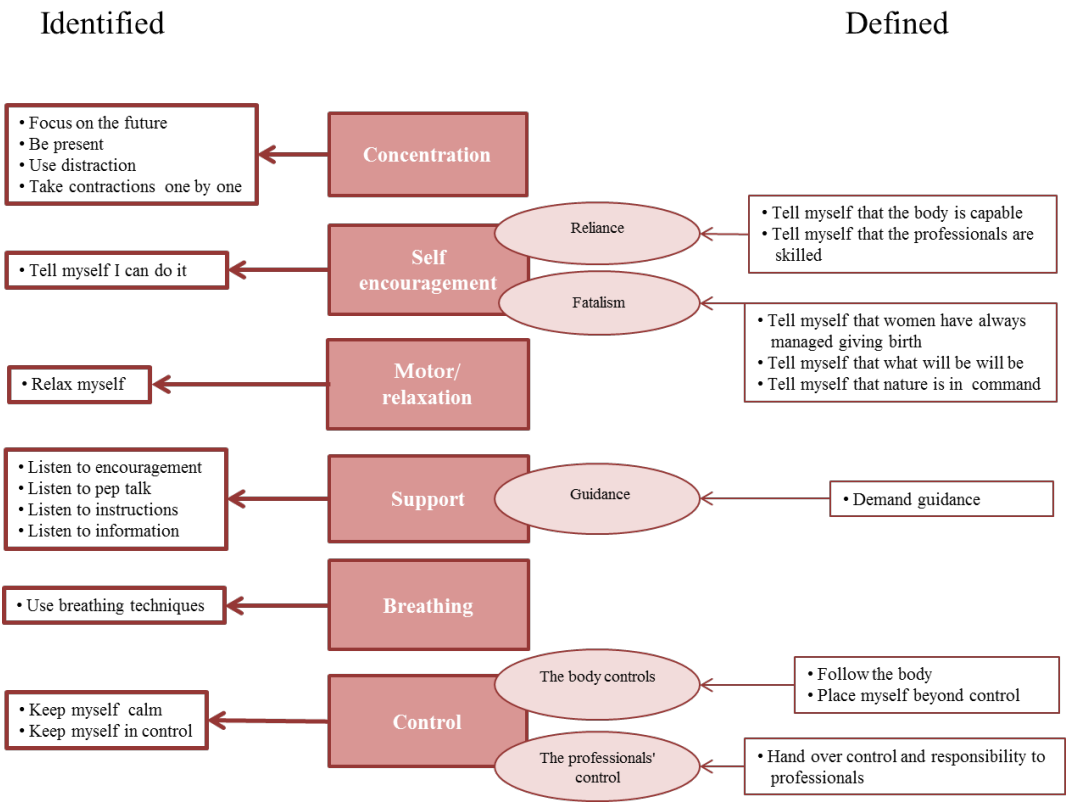

Figure 3. Contents of identified and defined childbirth self-efficacy in the context of severe fear of childbirth.

Table 8. Distribution of childbirth outcome expectancy statements in women with severe fear of childbirth

	Will be of help n	**Might be of help n**	**Total**
Concentration			
Focus on the future	3	3	**3**
Doing things to distract myself from the pain	4	4	**4**
Being present	0	1	**1**
Getting through one contraction at a time	0	1	**1**
Support			
Listen to encouragement/approval	3	0	**3**
Listen to pep talk	8	1	**9**
Listen to instructions	0	0	**0**
Listen to information about what is happening	3	0	**3**
Control			
Keep myself calm	0	2	**2**
Keep myself in control	0	0	**0**
Motor/relaxation			
Relax my body	2	0	**2**
Self-encouragement			
Tell myself I can do it	0	0	**0**
Breathing			
Use breathing techniques	0	0	**0**

Note: n = the number of statements

Table 9. Perceptions of childbirth efficacy expectancy in women with severe fear of childbirth

	Not possible n	Not sure I can n	Hope I can n	I will try n	Think I can n	Not sure I will n	Hope I will n	I will do n
Concentration								
Focus on the future				5				3
Doing things to distract myself from the pain								
Being present				2				1
Getting through one contraction at a time				2				1
Support								
Listen to encouragement								
Listen to pep talk								
Listen to instructions				3		2	1	2
Listen to information about what is happening								
Control								
Keep myself calm			1	4				1
Keep myself in control	1	3	2	1	2			
Motor relaxation								
Relax my body		1	3	2				
Self-encouragement								
Tell myself I can do it			3					
Breathing								
Use breathing techniques			2	8	1			1
	1	**4**	**11**	**27**	**3**	**2**	**1**	**9**

Note: n = the number of statements

Summary of results

The results are synthesized in Figure 4. The frames are formed by the context of severe fear of childbirth (orange oval), comprising agents in antenatal and delivery care, women (blue oval) and midwives (green, red and violet ovals). The ovals represent views of midwives and characteristics of pregnant women and those in labour, and the overlapping areas in the blue oval represent the care meetings. Central are the pregnant women and those in labour and the characteristics that might be mentioned, more or less explicitly, in their contacts with midwives at an antenatal care clinic, a labour ward and in other pregnancy-related settings such as an ultrasound department. There are views of midwives that are explicitly present (blue arrows) and views that might implicitly influence the care that they provide (green, red and violet arrows).

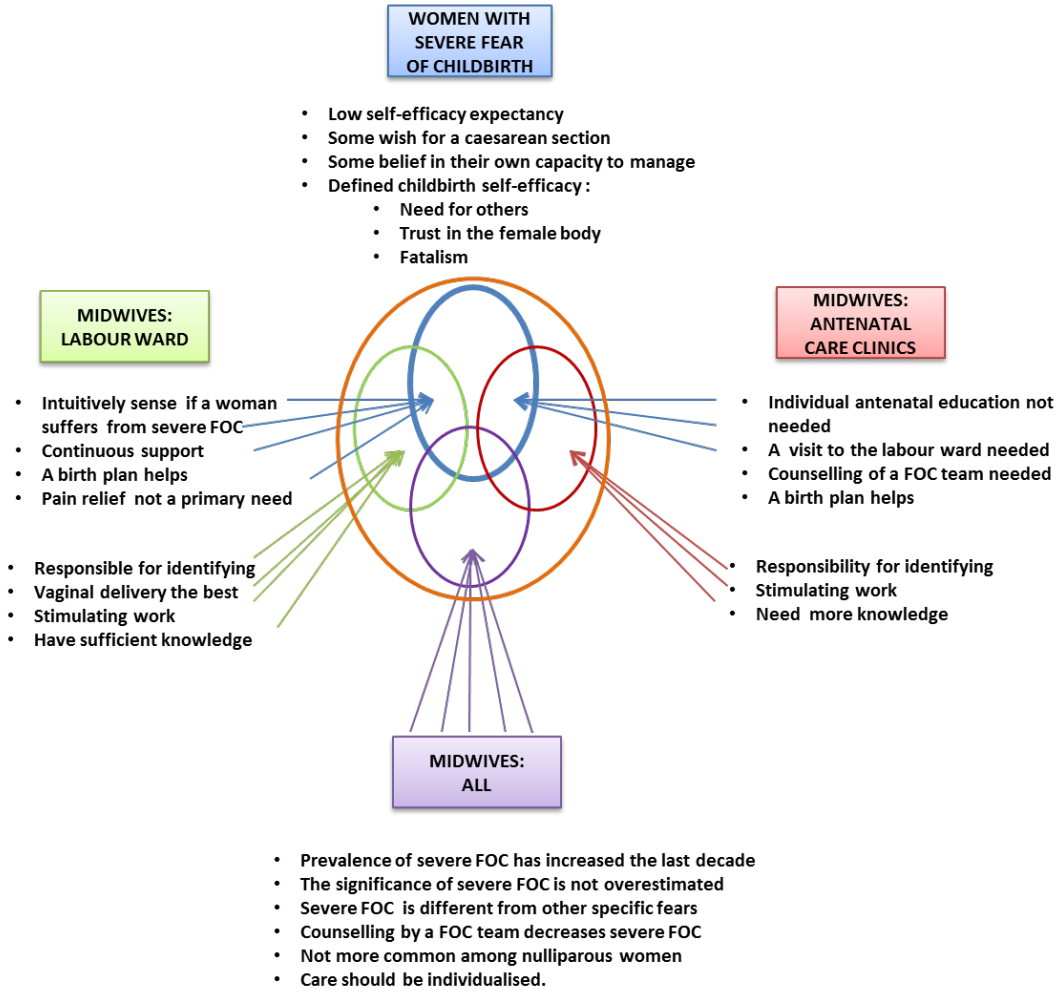

Figure 4. The intersection between women and midwives in antenatal care clinics and at labour wards in the context of severe fear of childbirth.

DISCUSSION

Discussion of findings

This thesis deals with two topics: midwives´ perceptions and views regarding FOC (Studies I, II), and, in nulliparous women, expectations of the forthcoming labour and delivery in the context of fear of childbirth (Studies III, IV).

Midwives' perceptions and views on fear of childbirth

Prevalence

In our interviews and survey, midwives thought that FOC has recently become a more common topic that arises in their conversations with pregnant women and that the prevalence of FOC is increasing (I, II). The midwives thought that pregnant women nowadays more often dare to talk about their severe FOC (I, II), while they themselves also had a more open attitude to the topic (I). The fact that the midwives stated that FOC had increased among pregnant women (I, II) is supported by our findings that 21% of the pregnant women fulfilled the criterion for severe FOC (III). In comparison, in a large Swedish sample, Ryding et al. found that 10% of women had severe FOC, using the same criterion, namely, a W-DEQ sum score of ≥ 85 (Ryding et al., 1998). Nieminen et al. also reported an increase of severe FOC, with nulliparous women having a higher mean score on the W-DEQ than parous women, while the latter showed a higher rate of severe FOC (W-DEQ total score ≥ 85 (Nieminen et al., 2009). Access to modern media is seen as a possible reason for this development, as the availability of pregnancy-related information on the Internet was suggested to promote worry (I). It is true that, nowadays, pregnant women frequently seek information about pregnancy-related issues on the Internet. However, the information obtained is rarely discussed with a midwife (Lagan, Sinclair, & Kernohan, 2011; Larsson, 2009). Furthermore, women visiting such websites also consider the information to

be reliable (Gao, Larsson, & Luo, 2012; Larsson, 2009), which implies a risk that irrelevant information is provoking unnecessary worry in vulnerable women. On the other hand, it cannot be definitively concluded that such information results in a higher level of FOC.

Consequences

FOC was thought to contribute to complicated deliveries such as caesarean sections (I), which were considered as not always being the best solution (I, II). Nevertheless, women with FOC are more often delivered by caesareans, elective as well as emergency ones (Handelzalts et al., 2012; Laursen et al., 2009; Ryding et al., 1998; Sydsjo, Sydsjo, Gunnervik, Bladh, & Josefsson, 2012; Waldenstrom et al., 2006). In their recent review, Wiklund et al. suggest that the nature and degree of fear are factors that should be taken seriously in a decision about a caesarean section based on a woman's request, but that the reason for the request of a caesarean ought to be balanced against both short- and long-term medical risks (Wiklund, Andolf, Lilja, & Hildingsson, 2012).

Not only is it the case that women with FOC run a risk of adverse outcomes; midwives can also be negatively affected when dealing with women with FOC, as the meetings with such women can be provoking (I). However, this did not seem to be a prominent problem since hardly any of the midwives tried to avoid working with women with severe FOC, but instead found it stimulating (II).

Midwifery care

According to our findings, the midwives do think that they are responsible for the identification of pregnant women and those in labour suffering from severe FOC (II). At the same time, the midwives mention that this is sometimes a difficult task, since FOC is not always explicitly mentioned or exhibited, but is instead occasionally embedded in various behaviours (I). Nevertheless, the midwives at ACCs thought that they had the ability to identify women with severe FOC (II). However it cannot be assumed that this is always the case. All women who were interviewed in Study IV fulfilled the criterion for severe FOC. Nevertheless, only two of a total of 17 had been identified as having sufficiently severe FOC that they were referred to the local FOC team. This might indicate that there is a considerable risk for nulliparous

women with severe FOC not being identified. This could depend on shortcomings in midwives' assessments. On the other hand, it is important to underline that women with FOC may be reluctant to talk about their fear as they do not think they can be helped and that doing so may even intensify their FOC (Eriksson, Jansson, et al., 2006). This can be even more evident during labour and delivery because, at that time, much attention is focused on the delivery of the child. It is possible that it is easier for midwives to bring up the subject in their contact with parous, pregnant women, since a new pregnancy inevitably functions as a reminder of a previous delivery with negative experiences and can therefore be a trigger for FOC. This might be an explanation for the finding in Study II that the midwives thought that severe FOC is a more common problem for parous women, congruent with reports that there are more parous than nulliparous women who receive counselling because of FOC (Mödrahälsovårdregistret, 2012; Ryding et al., 2003; Sydsjo et al., 2012).

The participating midwives considered that a birth plan is helpful for women with FOC (I, II). A birth plan often addresses wishes regarding the content of the care and the relationship with the midwife during labour and delivery, and is suggested to improve the birth experience, although its benefits are unclear (Lundgren, Berg, & Lindmark, 2003; Whitford & Hillan, 1998). Nevertheless, Lundgren et al. suggest that a birth plan might be helpful for women with FOC (Lundgren et al., 2003).

Midwives' views of severe FOC in relation to clinical experience and workplace

We found that the midwives, who worked at ACCs, in comparison with their colleagues at LWs, more often thought that they had a responsibility to identify women with severe FOC. This implies that they consider that women with FOC should be identified and cared for in advance of delivery.

Furthermore, the midwives at ACCs thought that special training in dealing with FOC is essential. Not surprisingly, this was agreed with by the midwives with experience from an FOC team. This probably suggests that, during pregnancy, specific policies are needed to alleviate FOC, while the care during labour mostly addresses the same strategies, irrespective of the woman's level of FOC. This view is underlined by the result that the midwives at LWs more often thought that they had sufficient knowledge to support women with

severe FOC than midwives at ACCs. If this is the case, the challenge during labour is to tailor care for the specific situation. Unfortunately, staff and women might have different appraisals of what happens during birth. Söderquist et al. showed for example that the delivery of the vast majority of women with post-partum PTSD was documented by the staff as a "partus normalis", while the women themselves saw their delivery as a traumatic event (Soderquist, Wijma, & Wijma, 2002). This illuminates the need for a post-partum follow up (Olin & Faxelid, 2003), which was also seen by the midwives in Study I as an important strategy for the post-partum care of women with FOC (I).

The midwives at LWs agreed more than those working at ACCs that they can intuitively sense if a woman is suffering from severe FOC. The responses to this issue might be associated with the assumption that intuition is an important part of midwifery knowledge (Berg, 2005; Davis-Floyd & Davis-Floyd, 1996; Parratt & Fahy, 2008). It is suggested that intuition develops as the level of experience increases, and it can be seen as a tool to understand and determine women's conditions and needs (Berg, 2005). Furthermore, together with theoretical and practical knowledge, intuition or sensitive knowledge has been pointed out as an essential part in a woman- centred midwifery care model (Berg, Asta Olafsdottir, & Lundgren, 2012). Consequently, it is not surprising that our respondents see intuitive knowledge as a tool to sense that fear is in the air when confronted with a fearful woman at an LW, even if she does not express this fear explicitly. However, it can be questioned whether the midwives overestimated their intuitive abilities to identify severe FOC adequately.

The relationship between childbirth self-efficacy and FOC

In line with the findings of Lowe and consistent with Bandura's theory, it was observed that women with higher levels of FOC had lower levels of childbirth self-efficacy (III) (Lowe, 2000). This suggests that, in various women, low childbirth self-efficacy is an important mediator of severe FOC, since perceived inefficacy in coping makes situations scary (Bandura, 1982).

Therefore, it was surprising that FOC was found in one-fifth of the women in the high childbirth efficacy group; in other words, despite their severe FOC, they believed they would manage to cope with the forthcoming labour and delivery. Alternatively, some women in the low childbirth self-efficacy group did not report severe FOC, which might indicate that, at least in some cases,

factors other than a low perceived self-efficacy for coping with labour are involved in making a delivery a source of fear.

The relationships of efficacy expectancy and FOC to socio-demographic characteristics, mental problems and preference for caesarean section

A small but significant number of the women with severe FOC would prefer a caesarean section (III). This was expected in view of the proposal that, according to the self-efficacy theory, avoidance is one way of coping with stressful situations (Bandura, 1982). Women who have low childbirth self-efficacy may be limited in their ability to motivate themselves to cope with labour, since efficacy beliefs are central for the cognitive regulation of motivation (Bandura, 1997). A woman who does not believe that she is capable of coping with the forthcoming labour and delivery may not even be motivated to try, knowing that a caesarean section is an alternative. Thus, when a woman considers a vaginal birth to be impossible to manage by herself, that is, she has low efficacy expectancy, she becomes fearful and a planned caesarean section is a way out.

In Study III, women with severe FOC more often sought help due to mental health problems before getting pregnant. This finding is in line with a large Finnish study (Rouhe et al., 2011). However, mental health problems did not explain severe FOC.

Content of childbirth self-efficacy

Study IV showed that the women with severe FOC knew about strategies related to childbirth self-efficacy as conceptualized by Lowe, although they had limited confidence in the usefulness of these strategies (Lowe, 1993). This knowledge might be derived from vicarious experiences, one of the sources of self-efficacy (Bandura, 1977). It is possible that such women have discussed how to cope with the forthcoming birth with their friends, next of kin and midwives at the ACC. Obtaining information from the Internet provides an additional explanation, since Larsson found that most pregnant women in Sweden look for pregnancy-related information on the Internet (Larsson, 2009). Nonetheless, the strategies that comprise childbirth self-efficacy as identified by Lowe were insufficient to describe self-efficacy for the upcoming

birth in these women (Lowe, 1993). The women with severe FOC had a defined childbirth self-efficacy (IV). The defined childbirth self-efficacy was conditional since the women considered themselves to be able to cope with labour under certain circumstances, for example, when guided by professionals.

It may be questioned if our findings of the defined childbirth self-efficacy are truly about self-efficacy or about another theoretical perspective. It was however clear from their narratives that the women referred to their own ability to perform the defined behaviours that were thought to help them to cope with labour, which is in line with the self-efficacy theory.

Methodological considerations

In this thesis, a variety of methodological approaches were applied. Both parts of the thesis have been illuminated by numerical and non-numerical data. This approach made it possible to obtain a more detailed as well as a more extensive understanding of FOC, regarding both the perspectives of midwives as well as the views of self-efficacy among pregnant women with FOC.

Study I

In Study I, data were gathered by focus-group interviews with 21 midwives, distributed over four groups with four to six participants in each group. Both the group size and the number of groups can be seen as limiting factors for the outcome. It would have been desirable to have had more participants, but they were difficult to recruit, probably because the midwives were unwilling to participate in their spare time. On the other hand, since all the participants were experienced midwives, well acquainted with the topic and involved in the focus-group discussions, the small number of participants may not have limited the outcome (Morgan, 1996). Moreover, small groups are recommended when the purpose is to obtain an understanding of peoples' experiences (Krueger & Casey, 2000).

In focus-group interviews, the moderator influences the quality of the data. In this study, the moderator (the author of this thesis) and the assisting moderator, both midwives, had adequate background knowledge. This was an

advantage since the moderators and the participants "talked the same language", which facilitated the discussions. A risk is that the participants wished to give socially desirable answers, as focus groups include a tendency towards conformity, even if polarization is also possible (Morgan, 1997).

According to focus-group methodology, the interactions in the groups are a crucial part of the information (Krueger & Casey, 2000). Therefore, a shortcoming of this study is that there was no analysis of participants' interactions, meaning that the result is limited to what the midwives verbally discussed. Nonetheless, it was relatively easy to illustrate similarities and dissimilarities in perceptions of FOC through the focus-group interviews.

Instead of using focus-group interviews, we could have performed individual interviews, which would have ensured confidentiality. On the other hand, the focus groups may have stimulated the participants' reflections upon their own experiences and views. The answers to the two questions about the experience of the group discussion itself confirmed this.

Study II

The questionnaire in Study II was constructed by the research team, mainly on the basis of the findings from Study I. Its purpose was to obtain information about the prevalence, distribution and interrelationships of variables according to FOC in Swedish midwives. The questionnaire comprised 32 close-ended questions, which have the advantage that they take participants less time to complete in comparison with open-ended questions. However, the collected information depends on the questions asked and how they are formulated (Polit & Beck, 2004). More than 70% of the invited midwives completed the questionnaire, which may indicate that the midwives found the questions relevant and easy to answer. A limitation is that the questionnaire´s reliability was not verified, for example, by means of a test-retest examination.

The major weakness of this study was that, in our ambition to make the statements fit to different workplaces, namely ACCs or LWs, we lost valuable information, for example, the participants' views on modes of delivery for women with severe FOC. Furthermore, the exclusion of midwives younger than 30 and older than 60 years, as well as the omission of those with less than one year of experience, implies a limitation. We failed to survey the general views of these midwives, but also those on the care of women with severe

FOC. The major strength of this study is the representativeness of all midwives in Sweden, and to our knowledge, the fact that it is the first study of its kind to investigate what midwives themselves think and know about severe FOC.

Study III

In Study III, data were gathered by means of two psychometric measurements, the W-DEQ version A and the CBSEI. The W-DEQ has been used in many studies worldwide and is one of the most common instruments for measuring FOC (Fairbrother & Woody, 2007; Fenwick et al., 2009; Johnson & Slade, 2002; Storksen et al., 2012). Severe FOC was defined as exceeding the W-DEQ total score of 85. This cut-off level was set in line with previous studies, where the group defined by the threshold of W-DEQ total score ≥ 85 comprised the upper decile of the sample of primiparous women (Ryding et al., 1998; Zar et al., 2001). Although this is a commonly used cut-off level, the magnitude of FOC differs between studies, depending on the sample examined; therefore, the specificity and sensitivity may also be affected (Fenwick et al., 2009; Hall et al., 2009; Rouhe, Salmela-Aro, Halmesmaki, & Saisto, 2009). Furthermore, one must keep in mind that, although the W-DEQ is well validated (Zar, 2001), a score on a questionnaire is not congruent with a diagnosis.

The data were collected from a homogeneous sample, namely, nulliparous women. This was carried out in order to control for the most influential source of self-efficacy, that is, the outcome of one's own performance. Consequently, the findings are limited to nulliparous women.

Another limitation of Study III is the respondent rate of 42%. Nowadays, a rate this low is not uncommon. For example, the respondent rate in the present study is in line with that in the Danish National Birth Cohort Study (Olsen et al., 2001). Since we have not been able to perform drop-out analyses, we do not know if the non-respondent women differ in terms of the level of childbirth self-efficacy or the level of FOC compared with the respondents, that is, if we have a selection bias. Accordingly, generalizations have to be handled with care.

Study IV

In Study IV, data collection was carried out by means of individual interviews with pregnant nulliparous women with severe FOC, selected according to their total score on the W-DEQ. During the interviews, all questions addressed expectations for the upcoming birth, not directly focusing on the interviewee's fear. Nevertheless, all informants in Study IV more or less explicitly stated that they had FOC. This strengthens the validity of our selection, namely, the context of severe FOC, and that the expectations mentioned were associated with women with FOC.

Interviews are interventions that affect the interviewees. Interviews can evoke emotions that can also be healing (Patton, 2002). This has to be considered, especially as the interviewed women fulfilled the criterion for severe FOC. Since the aim was to investigate expectations, FOC was not referred to, neither at the invitation to Study III nor that to Study IV. However, several women stated spontaneously during the interview in Study IV that their FOC was the reason for their participation. They added that the interview provided an opportunity to talk about their forthcoming delivery. In advance, the women were informed that the interviewer was a midwife. This might have encouraged them to talk about their expectations at the same time as the probing questions were influenced by the researchers' professional knowledge and pre-understanding. On the other hand, such professional knowledge and pre-understanding may have implicitly limited further exploration of the women's narratives, as the interviewer may have uncritically accepted the accuracy of the interviewee's story.

After each interview, many women stated that they had wished to have the opportunity to talk about the interview topics earlier during their pregnancy, indicating that the interview provided some form of relief.

Conclusions

Regarding Swedish midwives and FOC

In their work, at both ACCs and LWs, Swedish midwives:

- Are familiar with the problem of FOC;
- Have awareness of FOC among the pregnant women they meet;

- Have the opinion that severe FOC has increased during the last decade;
- Recognise severe FOC as a serious problem that influences pregnant women's lives significantly;
- See it as their responsibility to assess severe FOC in pregnant women during gestation;
- See FOC teams as an appropriate and useful addition to other midwifery care;
- At ACCs, advocate more education to deal successfully with women with severe FOC;
- At LWs, consider that they have the capacity to handle women irrespective of their degree of FOC;
- Have the opinion that the care for women with severe FOC should be individualised.

Regarding fear of childbirth

- Women with severe FOC comprise a vulnerable group, with lower education, more often being unemployed or on sick leave, and some having had mental problems earlier in their lives;
- Women with severe FOC, more than those with low FOC, have a greater preference for caesarean section.

Regarding self-efficacy

- Pregnant women with low self-efficacy, compared with those with high self-efficacy, do *not* more often prefer a caesarean section.

Regarding fear of childbirth and self-efficacy

- Women with high FOC also consider that they have a limited capacity to manage the labour and delivery;
- In addition to the domain of FOC, self-efficacy seems to be a useful concept to detect women who see the upcoming labour and delivery as problematic.

Clinical implications

Development of belief in self-efficacy is a potential route for the improvement of care for women with severe FOC.

It is crucial to start by identifying the pregnant women suffering from severe FOC. This could be carried out by a screening procedure of all pregnant women, for example, by means of the W-DEQ, which is already undertaken in various clinics in Sweden and the Netherlands. According to the findings that women with severe FOC had low and defined childbirth self-efficacy, an additional way to identify women with severe FOC could be to scrutinize women's belief in their own capability to manage the forthcoming labour and delivery.

During labour, verbal persuasion, namely, one of the sources of self-efficacy, could be used. Knowing that the women with severe FOC demonstrated confidence in defined childbirth self-efficacy implies that the stated strategies can be explicitly used during labour support, for example, by using phrases like, "Remember, women have always managed giving birth" and "Your body knows what to do".

For women who have low or defined childbirth self-efficacy, suitable behaviours to use during labour and delivery need to be identified and taught, and then actually used and supported during the birth process.

It is a prerequisite for improving the care of women with severe FOC to focus on psychological issues in midwifery education, as well as in the continuing education of clinically active midwives.

Future directions

In future research, it seems to be important to explore self-efficacy in parous women. Knowledge about how the outcome of one's own performance during delivery contributes to self-efficacy might provide knowledge that can

be used for developing care that prevents a negative birth experience as well as to promote a positive one.

The exploration and description of how vicarious experiences and verbal persuasion influence self-efficacy is also warranted.

In future research, it would be interesting to study the use of an intervention, where actively encouraging pregnant women to imagine their forthcoming birth concretely and to express their thoughts and emotions verbally is the experimental variable and FOC is the dependent variable.

SVENSK SAMMANFATTNING

De flesta kvinnor ser graviditet och förlossning som existentiella höjdpunkter i sina liv och upplever stor glädje av att vara gravid. Även om graviditet och förlossning är normala livshändelser kan dess förlopp inte förutsägas. Graviditet och förlossning är alltid förknipande med en del risker, både för den gravida kvinnan och för barnet. Alla gravida behöver därför mentalt hantera riskerna och den osäkerhet om utgången som en graviditet och förlossning innebär. Den mentala hanteringen av osäkerheten om graviditets- och förlossningsrisker och den egna förmågan att kunna föda fram barnet är olika för kvinnor. För de allra flesta kvinnor är detta inget problem. En liten del kvinnor bedömer emellertid situationen så hotande att det leder till en svår förlossningsrädsla som påverkar deras hälsa före, under och efter graviditeten. I Sverige har cirka 10 % av gravida kvinnor en sådan svår förlossningsrädsla att det påverkar det dagliga livet och för cirka 2 % av dessa kvinnor är rädslan så svår att den uppfyller kriterierna för en fobi, d.v.s. att de vill undvika att föda. Svår förlossningsrädsla medför också en ökad risk att uppleva svår stress i sen graviditet och att uppleva förlossningen som traumatisk.

Studier har visat att det finns ett samband mellan förlossningsrädsla och tilltron till den egna förmågan att hantera den kommande förlossningen (Eng. childbirth self-efficacy). Kvinnor med starkare förlossningsrädsla har lägre ”childbirth self-efficacy”. Enligt self-efficacy teorin är det bedömningen om hur man kan klara av att hantera en stressande situation som avgör graden av rädsla inför densamma.

Det övergripande syfte med avhandlingsarbetet var att beskriva barnmorskors uppfattningar om förlossningsrädsla samt att få kunskap om vilka förväntningar gravida kvinnor, som inte tidigare fött barn, har inför sin kommande förlossning relaterat till grad av förlossningsrädsla.

I den första delstudien genomfördes fyra fokus-grupps intervjuer med totalt 21 barnmorskor. De deltagande barnmorskorna kunde se orsaker och

konsekvenser till förlossningsrädsla och beskrev vad som behöver fokuseras i omhändertagandet av förlossningsrädda kvinnor.

Resultatet från den första studien lade basen till en enkätstudie som besvarades av 726 slumpmässigt utvalda barnmorskor i Sverige. En majoritet av barnmorskorna ansåg att svår förlossningsrädsla, inte är det samma som rädsla för blod och injektioner, att förekomsten har ökat de senaste 10 åren och att kvinnor nu vågar prata om sin rädsla. Vidare ansåg barnmorskorna att svår förlossningsrädsla är vanligare bland kvinnor som fött barn tidigare. De allra flesta barnmorskorna ansåg att individuella samtal vid specialmottagning för förlossningsrädda, s.k. Aurora mottagningar, har betydelse även om det inte alltid leder till minskad rädsla. Åsikter skilde sig åt om arbetsplatsen var en barnmorskemottagning eller en förlossningsavdelning. Att arbeta på en förlossningsavdelning var i högre grad förenat med att anse sig ha tillräckliga kunskaper för att stödja kvinnor med svår förlossningsrädsla samt att intuitivt kunna förstå när en kvinna har svår förlossningsrädsla. Barnmorskorna som arbetade på barnmorskemottagning ansåg att kvinnor med svår förlossningsrädsla ska skötas av barnmorskor med specialutbildning i att ta hand om förlossningsrädda kvinnor.

I den tredje delstudien besvarade 423 gravida kvinnor, som inte fött barn tidigare, frågeformulär som mätte graden av rädsla inför den kommande förlossningen och graden av self-efficacy inför förlossningen. Rädsla mättes med hjälp av Wijma Expectancy/Experience Questionnaire, version A (W-DEQ-A). Self-efficacy mättes med hjälp av Childbirth Self-efficacy Inventory (CBSEI). Resultatet visade att 21 % av kvinnorna hade en svår förlossningsrädsla och drygt hälften hade en bristande tilltro till sin förmåga att hantera sin kommande förlossning. En lägre utbildningsnivå, sjukskrivning och att ha sökt vård för psykiska problem före graviditeten var vanligare bland kvinnor med svår förlossningsrädsla. Bland alla 423 deltagare skulle 21 hellre ha ett planerat kejsarsnitt framför en vanlig förlossning. Fjorton av dessa fanns i gruppen kvinnor med svår förlossningsrädsla.

I den fjärde delstudien intervjuades 17 kvinnor med svår förlossningsrädsla om sina förväntningar på den kommande förlossningen. Berättelserna analyserades mot bakgrund av ”childbirth self-efficacy”, d.v.s. tilltro till 16

specifika strategiers betydelse för att klara av en förlossning och tilltron till att kunna utföra dessa. Resultatet visade att kvinnorna hade en viss tilltro till att kunna använda sig av koncentration, avslappning, andningsteknik, kontroll av eget beteende, självuppmuntran, samt att lyssna på stöd från omgivningen för att klara av förlossningen. Samtidigt såg kvinnorna alternativa strategier som skulle öka möjligheterna att hantera förlossningen, dvs. att med hjälp av att andra tar över ansvar och kontroll, kunna intala sig att kroppen har en inbyggd förmåga att klara av en förlossning samt att ha tillit till att ödet bestämmer vad som kommer att ske.

Sammanfattningsvis ansåg barnmorskorna att svår förlossningsrädsla är ett allvarligt problem som påverkar gravida kvinnors hälsa under graviditet och förlossning. Barnmorskor som arbetar på barnmorskemottagningar, jämfört med kolleger på förlossningsavdelningar uttryckte ett behov av utbildning för att ta hand om kvinnor med svår förlossningsrädsla. Förlossningsrädda kvinnor hade en lägre tilltro till sin förmåga att hantera sin kommande förlossning samtidigt som de uttalade tilltro till alternativa strategier som relaterades till en begränsad ”childbirth self-efficacy”.

Det är viktigt att identifiera kvinnor med svår förlossningsrädsla för att kunna ge dem stöd under graviditet och förlossning. Barnmorskor skulle kunna ha nytta av att tänka i termer av self-efficacy för att utreda förlossningsrädsla och mer specifikt kunna fastställa den enskilda kvinnans behov av stöd genom att stärka hennes tilltro till sin förmåga att klara av förlossningen.

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