

## ABSTRACT

*Aims and objectives:* This meta-synthesis aimed to identify key elements contributing to FOC derived from women's own reports. *Background:* Fear of childbirth (FOC) encompasses fear or anxiety about giving birth, which can resemble a phobic response. FOC holds implications for women's antenatal and postnatal wellbeing, and decisions made about the birth but a clear definition of the construct does not exist. *Method:* A meta-synthesis was conducted by searching databases (Web of Knowledge, CINAHL, EBSCO, Medline, PsychInfo, and PsychArticles) for qualitative studies describing women's perspectives with respect to fear, anxiety, concerns, phobia or stress about birth. A total of 25 papers, reporting findings from 24 studies, fulfilled eligibility criteria and were included in the synthesis. *Results:* Six key elements of FOC were identified; fears of the unknown, potential for injury, pain, capacity to give birth, losing control, and adequacy of support from care providers. A single overarching theme linking all elements was '*the unpredictability of childbirth*'. Three moderators of FOC were also identified; awareness of negative birthing experiences, information received about birth, and support received from care providers. *Conclusions:* Findings highlight the role of uncertainty in the birthing process as an overarching theme underpinning women's fears. Enhancing tolerance of uncertainty may be a way to reduce women's FOC. *Relevance to clinical practice:* Identification of the elements and moderators of FOC provide an insight into the potential mechanisms that contribute to women's fears, which can be used to inform methods of identifying women with FOC or a basis upon which to base supportive strategies to reduce women's fears for giving birth.

**KEYWORDS:** Pregnancy, childbirth, fear, anxiety, meta-synthesis, qualitative

**What does this paper contribute to the wider global community?**

- Six key elements of women's fear of childbirth and three moderators were identified
- The overarching theme of uncertainty underpinned many women's concerns about childbirth
- Moderators were negative birth events, information about birth and support from care providers

## MAIN TEXT

### **Introduction**

Fear of childbirth (FOC) encompasses expectations and feelings of fear and anxiety that specifically relate to giving birth (Hofberg & Brockington, 2000). The most severe fears can resemble a phobia of childbirth, termed ‘tokophobia’ (Hofberg & Brockington, 2000; Zar, Wijma & Wijma, 2002). No clear definition or identification of key mechanisms contributing to the development of FOC exist (Klabbers et al., 2016; Rondung et al., 2016).

Severe FOC can induce heightened distress and anxiety throughout pregnancy, with adverse implications for choices made about the birth, the way that birth is experienced, and postpartum psychological wellbeing. Women who report high levels of FOC are significantly more likely to request a caesarean section in the absence of medical indication (Dweik et al., 2014;). Heightened antenatal anxiety and fears about giving birth have also been associated with several implications for the progression and outcome of birth, including longer birth duration (Adams et al., 2012), premature delivery or delivery at a reduced gestational age (Rice et al., 2010; Orr et al., 2007). Implications for infant emotional, cognitive and behavioural development have also been reported (Capron et al., 2015). O’Connor et al. (2002) identified that elevated general anxiety during pregnancy was associated with a 70% increased likelihood of emotional and behavioural problems in children at 4 years of age, after controlling for postnatal maternal mood.

No routine requirements to ask women about their fears for birth exist in current UK pathways, and provisions for women who fear birth vary (O’Brien et al., 2016; Richens, Hindley & Lavender, 2015). Current UK antenatal and perinatal mental health guidelines recommend enquiring about general anxiety and depression (National Institute for Health and Care Excellence [NICE], 2014), however these enquiries are unlikely to identify all women experiencing FOC (Størksen et al., 2012). In the absence of a clearly defined construct, methods of identifying women experiencing FOC are idiosyncratic and poorly validated. In order to accurately define the construct of FOC, it is necessary to first identify key elements intrinsic to woman’s fears.

## **Aim**

The aim of this review was therefore to identify and synthesise the key elements of FOC as reported by women in studies using qualitative methodology.

## **Methods**

A systematic search of databases (Web of Knowledge, CINAHL, EBSCO, and PsychArticles) was undertaken in August 2016 to identify peer-reviewed studies fulfilling the inclusion criteria. Search terms included: pregnant women, pregnancy, childbearing, fear, anxiety, concern, tokophobia, qualitative, interview, focus group. A limit was not used on the year of publication for studies. A hand search of papers was also undertaken. The search was conducted again to account for studies published between August 2016- June 2017.

Studies were included if they (1) included women who had given birth or were pregnant at the time of participating in a study, (2) used a qualitative design (interviews, focus groups or written text description analysis), (3) focussed on women's perspectives on birth with respect to fear, anxiety, concerns, phobia or stress, and (4) examined women's fear and not just its presence. Studies were excluded if they (1) included women who never been pregnant or given birth, (2) did not focus on women's fears of giving birth (e.g., focused solely on concerns about pregnancy or motherhood), (3) used a quantitative design, (4) were not published in English, or (5) used an interview technique only to ascertain level of symptomatology or diagnosis (e.g., a structured diagnostic and clinician-led interview). Studies using a mixed-methods design were included only if data obtained via qualitative techniques could be (or were) disaggregated, and if qualitative data fulfilled the inclusion criteria.

## *Quality appraisal*

The methodological quality of papers was assessed using a checklist of items from the Critical Appraisal Skills Programme (CASP, 2002) and a checklist by Walsh and Downe (2006). Quality appraisal was conducted to guide interpretation and inferences of findings reported by studies included in the review,

and no study was excluded on the basis of this report. Details of the quality review are available upon request.

### *Analysis*

The synthesis of findings was undertaken using the methodology described by Noblit and Hare (1988) and Walsh and Downe (2009)

- i. *Compare and contrast.* Papers were read in depth to identify the findings as reported by each author. Findings were coded at a descriptive level, often using the terminology as reported by the original author, so as to preserve meaning from the original text (Downe et al. 2009)
- ii. *Reciprocal translation.* This involved the translation of findings reported by each study with regards to those reported by other studies. This process aimed to establish the extent to which findings from one study differed to another.
- iii. *Synthesis of themes.* Findings from each study were grouped by their conceptual similarity and presented (Table 3)

### **Results**

Twenty five papers, from 24 studies, were included in the review (Figure 1). Details of each study are included in Table 1 with key characteristics presented in Table 2. The most common locations for studies were Sweden (n= 7, 28%) and Australia (n= 6, 24%). Studies most often included mixed parity groups (n= 16, 64%), and samples where women were currently pregnant (n= 10, 40%). Almost half of the retained studies had purposefully recruited women who reported FOC (n = 11), however some reported findings from investigations into women's expectations or experiences of giving birth and where fear was an element identified through the analysis process (n = 12). Two studies had purposefully recruited women based on their preference for caesarean section. Findings were coded and grouped by reference to the content of women's fears. Via the synthesis of findings, an additional coding category is reported; influences that *moderate* fear.

#### **The content of women's fears (n= 25)**

Six elements were identified; (1) generic fear of the unknown, (2) potential for injury or harm, (3) fear of pain, (4) perceived capacity to give birth, (5) losing control, and (6) interactions with care providers. An overarching theme referred to as '*the unpredictability of childbirth*' was identified, present to varying degrees in each of the six elements. Each element is presented in the following section with relevant number of papers in brackets, and Table 3 provides information on the elements identified within each study. Figure 2 presents an overview of identified elements and their relation to the overarching theme.

#### 1. Fear of the unknown (n= 16)

For studies purposefully interviewing women with FOC a general fear of the unknown nature of birth was prominent. However fear of the unknown was also identified in explorations of women's general expectations for giving birth (Beaton & Gupton, 1990, Brodrick, 2008; Maclellan, 2010; Greer et al. 2014). Childbirth was recognised as an event like no other in a woman's life where they had very little or no control (Fisher et al., 2006), and that it was not a situation that could be 'planned' (Fenwick et al., 2015). Fisher et al. (2006) reported that fear of the unknown was a common theme throughout women's accounts regardless of parity. Lack of prior experience contributed to fear for primiparous women, whereas multiparous women's fear was determined by awareness of how 'uncontrollable' childbirth can be. Fenwick et al. (2015) reported that women described feeling lost, confused, and fearful of the unknown and 'presumably uncontrollable outcome' of childbirth. Fenwick et al (2009) also reported 'Not knowing what to expect' as a feature of women's concerns.

*"I think it is just that fear of the unknown... you have been told what is going to happen and you read what is going to happen and you just have no idea." (Brodrick, 2008)*

#### 2. Potential for complications, injury or harm (n= 21)

This was one of the most prominently reported elements of women's fears, and included concerns over the health and safety of the baby during birth, the potential to experience complications during labour and require intervention, and also fears about personal injury or harm as a result of the birthing process.

i. Health and safety of the baby (n= 19)

The health and safety of the baby was a central element of women's fears, identified in 19 studies. Women reported general concerns about the wellbeing of the baby (Maier, 2010), the baby being born healthy (Beaton & Gupton, 1990; Brodrick, 2008; Eriksson et al., 2006; Fenwick et al., 2009; Gonzalez et al., 2015; Lyberg & Severinsson, 2010; Melender & Lauri, 1999) and without any disabilities or abnormalities (Brodrick, 2008; Gibbins & Thomson, 2001; Melender & Lauri, 1999; Rilby et al., 2012; Ryding, 1993; Wilkinson & Callister, 2010). Eight studies reported that women were frightened that their baby would suffer physical injury or harm during the birth (Fenwick et al., 2010; Gonzalez et al., 2015; Karlström et al., 2011; Melender & Lauri, 1999; Nilsson & Lundgren, 2009; Rilby et al., 2012; Roosevelt et al., 2016; Ryding, 1993). Women in six studies reported fear of the baby dying, experiencing a miscarriage or stillbirth, regardless of their prior birth experience (Fenwick et al., 2015; Fisher et al., 2006; Furber et al., 2009 & Gonzalez et al., 2015; Serçekuş & Okumuş, 2009; Sjögren, 1997). This was reported by women regardless of their prior birthing experiences.

*'You've got this little person in your body inside you and you're thinking their whole survival depends on your inner strength and your ability to get them out as quickly as possible.'* (Fisher et al. 2006)

Within this category, the unknown nature of childbirth was inherent in many women's reports of their fears for harm to themselves or their infant (MacLellan, 2010; Nilsson & Lundgren, 2009; Serçekuş & Okumuş, 2009). For example, women interviewed by Nilsson & Lundgren (2009) reported that there were no guarantees for a successful childbirth, and feared that 'something is going to happen to somebody'. For women interviewed by Rilby et al. (2012), there was a perception that they dare not 'gamble' on having a healthy baby.

ii. Complications and interventions (n= 8)

Women reported fear over interventions during labour (Fenwick et al., 2005), obstetric complications including fetal distress, a lack of contractions, possibility of ruptures to the placenta (Gibbins & Thomson, 2001; Gonzalez et al., 2015; Melender & Lauri, 1999; Rilby et al., 2012; Serçekuş & Okumuş, 2009), or tearing during labour (Fisher et al., 2006; Fenwick et al., 2015). Although a fear of obstetric complications or requirement for interventions during birth were sometimes attributed to previous experiences of giving birth (Fenwick et al., 2015; Rilby et al., 2012), similar fears were also reported by studies interviewing first time mothers (Serçekuş & Okumuş, 2009). As highlighted in the extract below, fears over the unpredictability of birth and inability to know whether complications might occur were present in this category:

*'Will there be a problem during labour? Will something break, come out? All of it comes to mind and scares people.'* (Serçekuş & Okumuş, 2009)

iii. Personal health and safety (n= 8)

A perception of birth as a dangerous, risky event with the potential for personal physical harm was reported in several studies (Fenwick et al., 2006; Greer et al., 2014; Nilsson & Lundgren, 2009). In addition to this, women reported a fear of dying during childbirth (Roosevelt et al., 2016; Serçekuş & Okumuş, 2009; Sjögren, 1997; Wilkinson & Callister, 2010). One study cited that women struggled to conceptualise how a baby could be given birth to without extreme injury as a consequence (Fenwick et al., 2010). Greer et al. (2014) conducted interviews with 19 pregnant (mixed parity) women and their partners about the impact of fear on birthing preferences, and over half of the women perceived vaginal birth to pose considerable risk to either their own or their baby's health.

3. Fear of pain (n= 15)

A fear of pain was a predominant feature of women's fears for giving birth in some studies (Fisher et al., 2006; Melender & Lauri, 1999). Specifically, women feared the pain of contractions (Fisher, Huack & Fenwick, 2006), perineal trauma (Brodrick, 2008), pain associated with having a pain relief procedure (Brodrick, 2008) and the pain of 'pushing the baby out' (Fisher, Huack & Fenwick, 2006). Fear of pain



did not vary by parity; however, nulliparous women more predominantly reported this fear (Fenwick et al. (2015). Beaton and Gupton (1990) identified that primiparous women were concerned about how they would cope with pain, whereas multiparous women held the view that ‘they had coped with it before’ and that they ‘expected to cope with it again’ (p.135). However, this particular study included only 2 multiparous women and therefore inferences made on this basis are limited.

Women describe the pain of childbirth as a ‘large unknown that provoked anxiety and fear’ (Beaton & Gupton, 1990). Within this, being unable to predict how they would cope with the pain of giving birth was key (Beaton & Gupton, 1990; Brodrick, 2008; Fenwick et al., 2015; Fisher et al., 2006; Gonzalez et al., 2015; Greer et al., 2014; Fenwick et al., 2015, Maier, 2010, Rilby et al., 2012; Serçekuş & Okumuş, 2009).

*‘I really don’t know what to expect because I’ve never even had menstrual cramps. I couldn’t even compare it to that. I just don’t know what to expect and I guess that is what really scares me.’ (Beaton & Gupton, 1990)*

#### 4. Perceived capacity to give birth (n= 11)

##### i. Physical capacity to give birth (n= 7)

Women feared the difficulty of giving birth (Fenwick et al., 2015), that their bodies would be inadequate (Sjögren, 1997), that they would not ‘be able to deliver the baby’ (Serçekuş & Okumuş, 2009; Roosevelt et al., 2016), that the baby would be ‘too big’ (Greer et al., 2014; Melender & Lauri, 1999), that their pelvis would be too narrow, or that they would have insufficient contractions during labour (Erikson et al., 2006).

*‘...you see the baby on the scan and you see the head and you think... how could it get out of down there?’ (Greer et al., 2014)*

##### ii. Emotional capacity to give birth (n= 6)

Nilsson and Lundgren (2009) noted that primiparous women feared their emotional capacity to cope during childbirth. Multiparous also reported similar concerns but they were based on previous birthing experiences. Women also reported feeling that they weren't 'prepared enough' (Fenwick et al., 2009), or that they would make an incorrect decision with regard to how they chose to birth their baby (Greer et al., 2014; Roosevelt et al., 2016). Again, uncertainty about how they would cope with the demands of giving birth was integral to women's concerns.

*'People say, "Oh you're a woman, you're supposed to know what to do," and it isn't like that. Everything about it is terrifying and even though you may have a baby daddy or some family, everyone is still looking at you and I just didn't know; I didn't know what to do.'* (Roosevelt et al., 2016)

Inherent in this element was the inability for women to foresee how they would cope, and uncertainty in how they might react, during labour.

#### 5. Losing control (n=7)

Six studies reported that women were fearful of losing emotional or physical control during labour (Fisher, Huack & Fenwick, 2006) of panicking during labour (Serçekuş & Okumuş, 2009), or that a loss of control would mean that they did not 'perform well' (Sjögren, 1997). Women feared that they would not cooperate with the guidance of staff or, more generally, how they would behave and react during childbirth (Eriksson et al., 2006; Maier, 2010; Nilsson & Lundgren, 2009).

*'I was really worried that I was going to be really nasty to someone and really demanding and shouting and carrying on''* (Fisher, Huack & Fenwick, 2006)

Fenwick et al. (2015) reported a 'perceived capacity to plan for and determine desired experiences and outcomes' were identified as a source of fear relating to maintaining control, highlighting concerns over the unpredictability of childbirth within this context.

6. Interactions with care providers (n= 10)

Women feared a lack of professional competence in those providing care for them, that they wouldn't receive sufficient medical care (Eriksson et al., 2006), that they would not have a supportive relationship with the person caring for them (Fisher et al., 2006; Lyberg & Severinsson, 2010; Serçekuş & Okumuş, 2009), that they would not receive enough support during labour and birth (Rilby et al., 2012; Sjögren, 1997), or that they would be left physically alone and 'abandoned' by their care provider (Roosevelt et al., 2016).

*'I never worried about feeling abandoned by my family. I worried about being abandoned by my doctor and nurse.'* (Roosevelt et al., 2016)

A perceived imbalance of power was reported, where women were concerned about their ability to maintain control over decisions that were made about their care (Fenwick et al., 2015; Lyberg & Severinsson, 2010; Sjögren, 1997). Women were concerned that their beliefs and values about giving birth would contrast with those of the staff present, and that they would receive interventions that they did not want (Fenwick et al., 2009; Fisher et al., Greer et al., 2014; 2006; Maier, 2010). Underlying some women's concerns was difficulty not 'knowing' the care provider prior to birth (Fenwick et al., 2015), and that ultimately women could not know whether they will receive the desired nature of support until they are in that situation; *'will they [the staff] be supportive and understand if I am fearful?'* (Fisher et al. 2006). In some studies, these concerns manifested as a general lack of trust in care providers (Greer et al., 2014; Serçekuş & Okumuş, 2009; Sjögren, 1997; Roosevelt et al., 2016).

**Overarching theme: The unpredictability of childbirth**

These six elements share one overarching theme of concern about the unpredictable nature of giving birth. This was present both in terms of the general unknown as in element 1 but also within each of the other five more specifically focussed elements. Concerns over the uncertainty of the progression of birth were present in women's descriptions of their fears for experiencing harm to themselves or their

infant or for requiring interventions during labour. With regards to fear of pain, a key element of fear was the inability to predict the level of pain that would be experienced, or how they would cope with it. This was also present in their fears for their own personal capacity to birth their baby. Women's discourses on the potential to lose control during birth were also at times attributed to the notion that their ability to tolerate the demands of labour was unknown. Finally, fears associated with interactions with care providers were at times attributed to the inability to 'know' who would be providing their care during birth. The unpredictability of childbirth is therefore suggested as an overarching theme indicating the fundamental construct of concern.

*"I'm not the kind of person that really loves going into things with unknown quantities at the end." (Fenwick et al., 2015)*

### **Moderators of childbirth fear (n= 23)**

Several moderators were implicated in the severity of women's FOC. These included (1) negative birth experiences (via personal experience or other people's reports), (2) information about birth, and (3) support from care providers.

#### **1. Negative birth experiences (n= 19)**

##### **1.1. Prior birthing experiences (n= 14)**

Reflected in the accounts of parous women only was a strong influence of a previous birth on fears experienced during a current pregnancy. There were concerns that complications or difficulties experienced during a previous birth would occur again, which contributed to the fear and anxiety they were feeling during pregnancy (Beaton & Gupton, 1990; Karlström et al., 2011).

*'I had a very tough first birth, I will absolutely not give birth vaginally again.'* (Karlström et al., 2011)

##### **1.2. Other people's 'horror stories' (n= 10)**

An additional feature of this category was the influence of other people's negative birthing experiences. Often referred to as 'horror stories' negative birth experiences recalled to women by family or friends,

or communicated via the media and internet, influenced women's concerns for their own labour.

Watching a video of childbirth also contributed to some women's fear (Fisher et al., 2006; Melender, 2002).

*'Well, it may be the mental image that I have, as I have heard the horror stories of other women' (Melender, 2002)*

## 2. General information about birth (n=12)

Knowledge and understanding with regards to labour and birth was a prominent feature in several studies contributing to women's FOC. Gaining knowledge about childbirth was a source of comfort for some women as they were able to comprehend the rarity of some complications (Fenwick et al., 2015) and prepare themselves for birth (Melender, 2002). However for others, having what was perceived as 'too much' information increased awareness of 'what could happen' and perpetuated their fear (Melender, 2002; Serçekuş & Okumuş, 2009);

*'I'm a big fan of statistics. I'll research on google the rates of women having an episiotomy and rates of tearing and things that can go wrong...that's what scares me.'* (Fenwick et al., 2015)

Conversely, insufficient knowledge or understanding about the labour and birth process was an element of other women's fears (Fenwick et al., 2015; Serçekuş & Okumuş, 2009). Not understanding the information that was provided, feeling confused by conflicting information or a general lack of understanding perpetuated women's fears of birth (Fenwick et al., 2015);

*'I am afraid...It's the first time for me. I don't understand pregnancy and how the baby comes out.'* (Maclellen, 2010)

## 3. Support from care providers: access to, suitability, and perceived helpfulness (n= 9)

Access to, suitability and perceived helpfulness of the support women received during pregnancy were key factors in determining the level of fear that was experienced. Specifically, where antenatal care or receipt of information from care providers was perceived to be inadequate, insufficient or not attainable, then this contributed to the isolation experienced by some women with respect to childbirth. Fisher et al. (2015) identified that difficulties arose when women perceived the time between appointments to be lengthy, or when providers did not relay birth-related information. Some women reported feeling uncomfortable asking questions due to their perception that the provider had a busy schedule;

*'They're (hospital midwives and doctors) always very kind and say, "is there something that you want to talk about?" You feel pressured because, you know, there's like a billion of women waiting, and then you're like, okay maybe it's not that important...' (Maier, 2010)*

Conversely, positive support from providers helped mitigate some women's fears (Fisher et al., 2006; Lyberg & Serverinsson, 2010; Rilby et al., 2012; Salomonsson et al., 2013). However, as noted by Fisher et al. (2006), the mere presence of a midwife was not protective but rather the way that midwives cared for patients was helpful in relieve women's fears. Women valued midwives who were confident, relayed information in a clear manner and were receptive to women's needs.

## **Discussion**

This meta-synthesis collated evidence on the content of women's fears for giving birth. Six key elements of women's fears were identified; the unknown nature of childbirth, the potential for complications, injury or harm, pain, their capacity to give birth, losing control during labour, and interactions with care providers. An overarching theme, the unpredictability of childbirth, was proposed to represent both general concerns over the unknown nature of giving birth but also present in each of the distinct focal points of women's fears. There was a high degree of consensus between studies and between parity groups about the elements of birth that were feared by women, but the nature of fears sometimes differed between women with or without a prior experience of giving birth. Through the discussion of fear, women also reported different aspects that moderated the level of concern that they

experienced. These included prior experiences of childbirth (either personal or encountered vicariously), the information about birth and support from care providers during pregnancy.

### *The content of women's fears*

The key elements of women's fears highlight physiological (e.g., fear of injury to the self or infant, fear of pain, lack of physical capacity), psychological (fear of the unknown, loss of control, lack of emotional capacity) and sociological (fear of not feeling supported or receiving adequate support) focal points of FOC. Of specific pertinence within each of the elements was the unpredictable nature of childbirth.

Findings are consistent with wider quantitative literature on FOC, where concerns over pain, intervention, injury or harm (to the self or the infant), support during labour or ability to cope with labour are consistently endorsed highly by fearful women (Crowe & von Baeyer, 1989, Saisto & Halmesmäki, 2003). The importance of women's perceptions of support during and around labour has been emphasised elsewhere, highlighting that positive and welcoming interactions with midwives can promote a sense of safety in women and influence perceptions of capability (Karlström et al., 2015).

This synthesis also highlights the role of uncertainty underpinning women's general and specific concerns for giving birth. Childbirth is an event that is inherently unpredictable. The way that uncertain or ambiguous situations are interpreted has been highlighted as an important determinant for generalised anxiety disorders. Intolerance of uncertainty (IU) is defined as a cognitive disposition that increases the likelihood than an ambiguous situation with the potential for a negative outcome is interpreted as more threatening, leading to worry (Dugas et al., 1998). To date, the role of IU in the development of women's fears for giving birth has not been specifically investigated. However further investigation into the role of certain cognitive dispositions, such as IU, could inform the development and aid both the identification and support of women with FOC.

The wider quantitative literature has identified fear of pain as a key element of women's fears.

Jokić-Begić, Žigić, and Nakić Radoš (2014) reported that, for primiparous women, FOC was most severe for women who expected a higher intensity of pain, and remained a significant predictor of FOC after additional variables of trait anxiety and anxiety sensitivity were accounted for. For multiparous women, anticipation of more acute pain was one factor associated with a higher severity of FOC. Perceptions of anticipated pain can influence the experience of pain. Pain catastrophizing is a tendency to focus on negative or worrying thoughts of pain and its potential meaning, and has been associated with more severe accounts of pain experiences (Escott, Slade & Spiby, 2009). A Swedish study reported that women who reported cognitions commensurate with ‘pain catastrophising’, in comparison to those that did not, anticipated and experienced labour pain as more severe (Flink et al., 2009) despite being similar in age, use of analgesics and birth mode. Therefore the way that pregnant women anticipate or conceptualise pain is key.

Women’s concerns over not having the physical or emotional capacity to give birth resonate with existing literature on self-efficacy and childbirth. Self-efficacy consists of two primary domains; outcome expectancy and efficacy expectancy (Bandura, 1977). Outcome expectancy refers to a belief that certain behaviours will be helpful in managing a particular situation, and efficacy expectancy refers to the belief that the individual is capable of implementing such behaviours when required. In a study of 423 Swedish nulliparous women, efficacy expectancy was associated with FOC (Solomonsson et al., 2013). Thus, women were able to identify behaviours that could help them cope with labour and delivery, but they did not feel capable to apply these behaviours. Findings from this review emphasise the role of women’s perceptions of their own capacity to cope with the demands of labour and birth in the development of FOC.

#### *Moderators of women’s fears*

Vicarious exposure to negative birth information, often referred to as ‘birth horror stories’, has been highlighted elsewhere as an important determinant of FOC in nulliparous and primiparous women (Thomson et al., 2016; Stoll et al., 2014). One source of information, media representation, has been subject to debate (Hundley, Duff, Dewberry et al., 2014). The way that childbirth is portrayed in the



media and via television programmes is likely to be a key moderator in the perspectives women form (Luce et al., 2016). A recent review of National British newspapers also highlighted a tendency for newspapers to use emotive language and to disproportionately focus on the risks of giving birth, including extreme clinical cases, staff negligence or celebrity experiences of adverse birth complications (MacLean, 2014).

The wider quantitative literature has highlighted previous negative birth experience as a key determinant of fear during a subsequent pregnancy (Hildingsson, 2014; Sluijs et al., 2012, Størksen et al., 2015), and this is emphasised in this meta-synthesis as a moderator for women's fears. Women who have experienced a previous traumatic birth may experience a subsequent pregnancy more difficult, as they encounter reminders of the birth and develop concerns that they may experience a similar occurrence again. This finding underscores the importance of providing support for women with a prior traumatic birth experience support throughout their pregnancy to manage their concerns.

Women reported that knowledge of childbirth could impact upon their fears in a number of ways. Of specific pertinence was the quality and trustworthiness of information received. This finding emphasises the importance of consulting women about their fears, and that they are able to access accurate and appropriate information to support the decisions they make throughout their pregnancy. It is likely too that receiving information about birth via the media and other internet-based channels may influence the perceived trustworthiness of information.

### *Strengths and Limitations*

Due to the lack of translation, only studies published in English were included in this synthesis. Several studies included mixed parity groups and did not disaggregate fears by parity (e.g., Greer et al., 2014, Karlström et al., 2011), therefore inferences about issues of specific pertinence to primiparous or multiparous women are limited. Although some studies noted the level of obstetric risk of women in their sample (e.g., Gibbins & Thomson, 2001), or specifically sought to interview women who were of low obstetric risk (Brodrick, 2008; Gibbins & Thomson, 2001), this criteria was not universal.

## **Conclusion**

A clearly defined construct for FOC, grounded in the experiences of women, is essential for the development of effective methods to identify and support women during pregnancy and childbirth. This review synthesises women's reports of their fears for giving birth, highlighting six key elements that were present as distinct components but also related to an overarching element; the 'unpredictability of childbirth'. Three factors moderated fear; awareness of negative birthing experiences, information about birth and support from care providers. Strategies to enhance tolerance of uncertainty may therefore hold promise as clinical interventions to reduce FOC and need to be developed and evaluated.

## **Relevance to clinical practice**

Identification of the content and moderators of FOC provide an insight into the potential mechanisms that contribute to women's fears. Identification of women with high levels of fear requires scales with appropriate content validity, and the inclusion of the relevant domains for fear is a key requirement. The most predominantly used measure for FOC, the Wijma Delivery Experience and Expectancy Questionnaire (Wijma, Wijma & Zar, 1998), was developed using the clinical experience of the scale's authors, and studies have identified issues relating to the translatability of items for use with an English speaking sample. Furthermore, the WDEQ does not directly assess fears relating to the unpredictability of childbirth (Lukasse et al., 2014), identified as integral to women's fears in this review. Further research is therefore required to develop measures grounded in the experiences of women with FOC and findings from this meta-synthesis provide a basis upon which to develop or inform the assessment of such measures.

Findings also highlight several potential mechanisms upon which to base supportive strategies to reduce women's fears for giving birth. Existing intervention studies are few in number, and often limited by small sample sizes or absence of a comparative control group (Veringa et al., 2016). Further research and identification of effective methods to alleviate women's fears for giving birth throughout pregnancy

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are required. Approaches to specifically address enhancing tolerance of uncertainty may be worthy of particular attention.

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Table 1. Characteristics of studies included in the meta-synthesis

Author, setting	Sample	Inclusion / exclusion	Method
Bayes, Fenwick & Huack (2008); Australia	141 women; 70 primiparous, 71 multiparous, 4-6 weeks after birth	Age 16 years and above, parity 0-4, ability to read, write and comprehend English	Analysis of written free text
Beaton & Gupton (1990); Canada	11 women in their 3 <sup>rd</sup> trimester of pregnancy; 9 primiparous, 2 multiparous women	None given	Face-to-face interviews
Brodrick (2008); UK	8 women; all primiparous, 3 <sup>rd</sup> trimester (34- 41 weeks)	Low risk pregnancy / identification of underlying medical condition	Face-to-face interviews
Eriksson, Westman & Hamburg (2006); Sweden	308 women; 119 primiparous, 189 multiparous, approximately 1 year postpartum	Swedish speaking / NICU admission for newborn, presence of serious medical problems, had a baby after index pregnancy	Analysis of written free text
Fenwick et al. (2005); Australia	202 women; 14 pregnant with first child, 83 primiparous, 101 multiparous, 4 parity missing	Currently pregnant or gave birth within the previous 12 months	Telephone interviews
Fenwick et al. (2010); Australia	14 women; 8 primiparous, 6 multiparous;	Experience of elective caesarean in previous 5 years	Telephone interviews
Fenwick et al. (2015); Australia	43 women, 2 <sup>nd</sup> - 3 <sup>rd</sup> trimester (24- 34weeks)	Women who were fearful of birth (>66 on WDEQ), received a counselling intervention as part of a trial	Analysis of telephone counselling session from a previous trial
Fisher, Huack & Fenwick (2006); Australia	22 women; 8 primiparous, 14 multiparous.	Currently pregnant or <12 months of birth, reporting fear or anxiety related to birth	Telephone interview
Gibbins & Thomson (2001); UK	8 women; all primiparous, 36 weeks pregnant	Primiparous, low-risk singleton pregnancy, at least 36 weeks gestation, aged >18 years	Face-to-face interviews
Gonzalez de Souza, et al. (2015); Brazil	6 women; all primiparous, timing of interview not provided	Aged >18 years, primiparous, given birth ‘naturally’ ( <i>not specified</i> )	Face-to-face interviews

# RUNNING HEAD: What do women fear about childbirth?

Greer, Lazenbatt & Dunne (2014); Ireland	19 pregnant women, mixed parity but % not provided, timing of interview not provided,	Low obstetric risk/ not provided	Face-to-face interviews
Karlström, et al. (2011); Sweden	71 women, mixed parity but % not provided, 2 <sup>nd</sup> trimester (17-19 weeks)	Preference for caesarean section, ability to speak English, no identified medical deviations	Analysis of written free text
Lyberg & Severinsson (2010); Norway	13 women; 4 primiparous, 9 multiparous	Participation in a prior intervention study, >3 with a midwife from the team as part of this	Face-to-face interviews
MacLellan (2010); Cambodia	13 women; 3 primiparous, 10 multiparous, between 2 <sup>nd</sup> and 3 <sup>rd</sup> trimester (26- 40 weeks)	Living in rural Cambodia	Face-to-face interviews
Maier (2010); Australia	27 women; 16 primiparous, 11 multiparous, all 3 <sup>rd</sup> trimester	None provided	Face-to-face interviews
Melender (2002); Finland <sup>a</sup>	20 women; 10 primiparous, 10 multiparous, 2-3 days postpartum	Women who had given birth and who were still in hospital	Face-to-face interviews
Melender & Lauri (1999) <sup>a</sup>	20 women; 10 primiparous, 10 multiparous, 2-3 days after birth	Women who had given birth and who were still in hospital	Face-to-face interviews
Nilsson, Bondas & Lundgren (2010); Sweden	9 women; all multiparous, 2 <sup>nd</sup> -3 <sup>rd</sup> trimester (18- 39 weeks)	Pregnant, Swedish-speaking, seeking support for intense FOC, previous negative birth exp.	Face-to-face interviews
Nilsson & Lundgren (2009); Sweden	8 women; 2 primiparous, 6 multiparous, 2 <sup>nd</sup> -3 <sup>rd</sup> trimester (24- 27 weeks)	Pregnant, Swedish-speaking, seeking support for severe fear of childbirth	Face-to-face interviews
Rilby et al. (2012); Sweden	908 women; all multiparous, 4- 7 years after birth	Participation in a previous survey about perineal trauma	Analysis of written free text
Roosevelt & Low (2016); USA	22 women; 9 currently pregnant, 13 given birth in past 5 years, Parity not provided	Aged 18-44, self-identified fear, pregnant or <5 years postnatal / non-English speaking	Focus groups (x3)

RUNNING HEAD: What do women fear about childbirth?

Salomonsson, Bertero & Alehagen, 2013); Sweden	17 women; all primiparous, 3 <sup>rd</sup> trimester (32- 38 weeks)	Self-reported severe fear of childbirth (>84 on WDEQ) between 25-26 weeks of pregnancy	Face-to-face interviews
Serçekuş & Okumuş (2009); Turkey	19 women; all primiparous, 3 <sup>rd</sup> trimester, timing not provided	Primiparous, 3 <sup>rd</sup> trimester, self-reported fear prior to birth, no identified risks	Face-to-face interviews
Sjögren (1997); Sweden	100 women; 36 primiparous, 64 multiparous, timing not provided	Women seeking support for severe anxiety for giving birth	Clinical interview
Wilkinson & Callister (2010); Ghana	24 women; all multiparous, 2 weeks – 2 months after birth	Not provided (snowball sampling)	Face-to-face interviews

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NOTE. WDEQ: Wijma Delivery Expectancy Questionnaire; FOC: fear of childbirth. <sup>a</sup>Reports analysis of data obtained from the same study

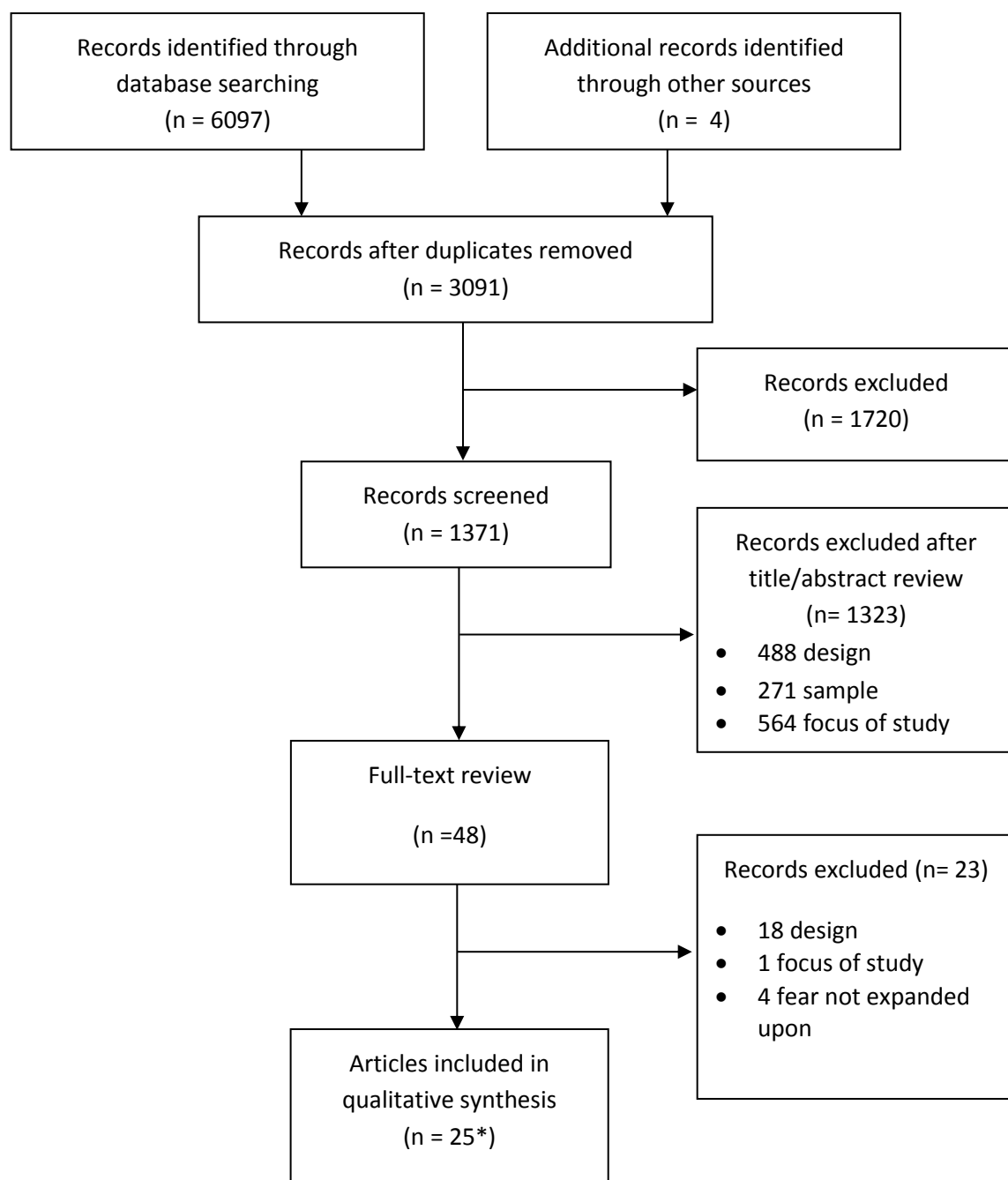
Table 2. Summary of included studies (N= 25)

		Number of studies* N (%)
<b>Country</b>	Sweden	7 (28%)
	Australia	6 (24%)
	UK	2 (8%)
	Finland	2 (8%)
	Brazil	1 (4%)
	Ireland	1(4%)
	Norway	1(4%)
	Cambodia	1(4%)
	USA	1(4%)
	Turkey	1(4%)
	Ghana	1(4%)
	Canada	1 (4%)
<b>Focus of study</b>	General expectations for birth	12 (48%)
	Investigating FOC	11 (44%)
	Preference for caesarean section	2 (8%)
<b>Parity</b>	Mixed parity	16 (64%)
	Primiparous	5 (20%)
	Multiparous	4 (16%)
<b>Sample</b>	Pregnant at time of participation	10 (40%)
	Postpartum	9 (36%)
	Mixed	4 (16%)
	Not provided	2 (8%)
<b>Data collection</b>	Qualitative interview	20 (80%)
	Written free text	4 (16%)
	Focus group	1 (4%)

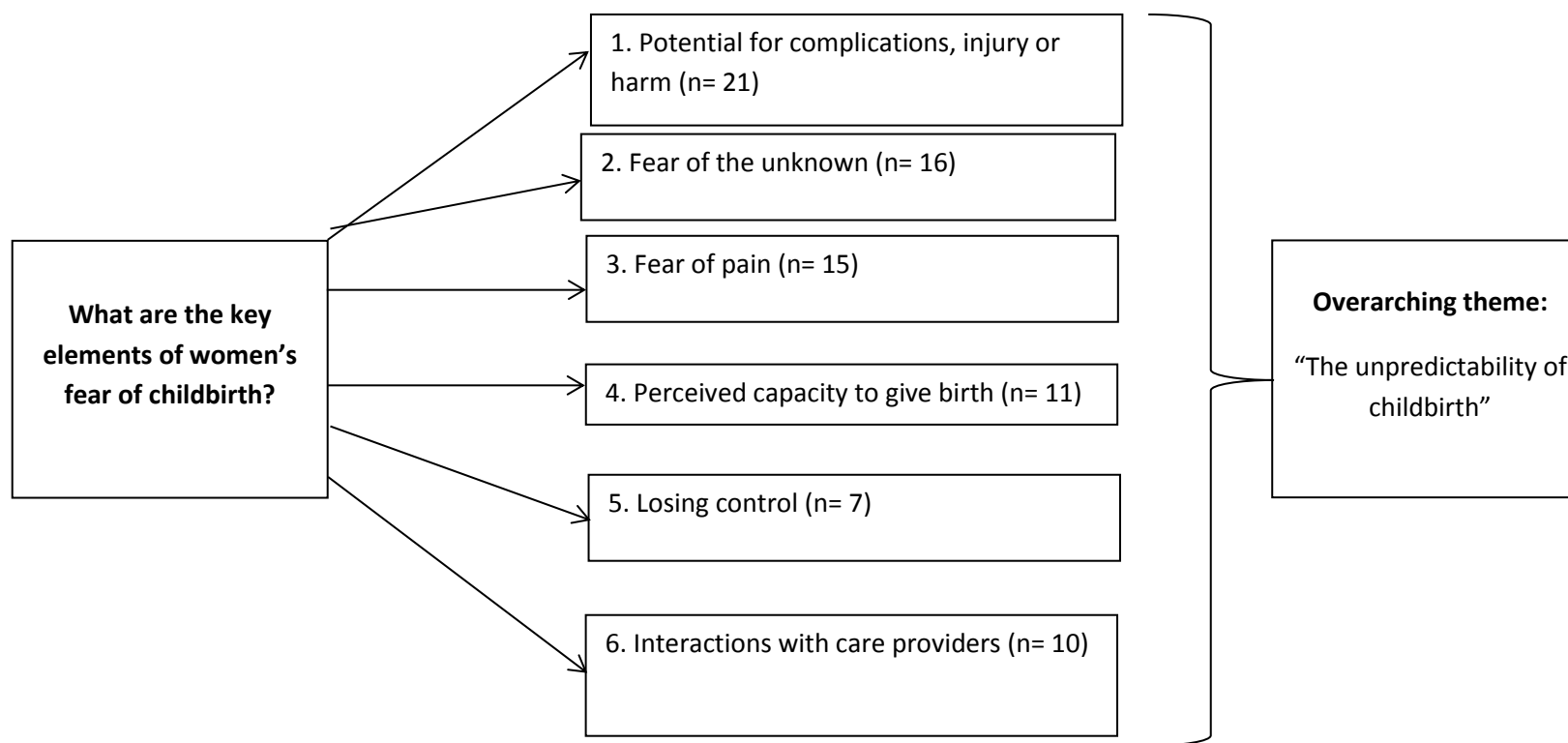
Table 3. Overview of codes identified relating to the content of women's fears for giving birth

	Eriksson et al. (2006)	Fenwick et al. (2015)	Fisher et al. (2006)	Melender (2002)	Melender & Lauri (1999)	Nilsson et al. (2010)	Nilsson & Lundgren	Lyberg et al. (2010)	Salomonsson et al. (2013)	Serçekuş & Okumuş	Sjögren (1997)	Fenwick et al. (2010)	Karlström et al. (2011)	Bayes et al. (2008)	Beaton & Guppton (1990)	Brodrick (2008)	Fenwick et al. (2005)	Gibbins & Thomson	Gonzalez et al. (2015)	Greer et al. (2014)	Maclellan (2010)	Maier (2010)	Rilby et al. (2012)	Roosevelt et al. (2016)	Wilkinson (2010)
<b>Fear of the unknown (16)</b>	x	x	x	x	x		x			x				x	x	x	x			x	x	x	x	x	
<b>Potential for complications, injury or harm (21)</b>	x	x	x		x		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x
<i>Health and safety of the baby (19)</i>	x	x	x		x		x	x		x	x	x	x	x	x	x		x	x			x	x	x	x
<i>Complications and interventions (8)</i>		x	x		x					x							x	x	x				x		
<i>Personal health and safety (8)</i>	x						x			x	x	x		x										x	x
<b>Fear of pain (15)</b>	x	x	x		x					x	x		x	x	x	x	x			x	x	x	x		
<b>Their capacity to give birth (11)</b>	x	x			x	x	x	x		x	x						x			x				x	
<i>Physical capacity to give birth (7)</i>	x	x			x					x	x						x			x					
<i>Emotional capacity to give birth (6)</i>							x	x		x	x													x	
<b>Control (7)</b>	x	x	x					x		x	x			x											
<b>Fear of not feeling supported (10)</b>	x	x	x					x		x	x									x		x	x	x	
<i>Fear disclosed prior to interview<sup>a</sup>:</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<i>Parity of participants<sup>b</sup>:</i>	B	B	B	B	B	M	B	B	P	P	B	B	B	B	B	P	B	P	P	B	B	B	M	M	M

NOTE: <sup>a</sup>Whether fear of childbirth was disclosed by women prior to participation in the study; Y= yes, N= no, CS= women were recruited based upon their preference for a caesarean section; <sup>b</sup>B= mixed parity sample, M= multiparous sample only, P= primiparous sample only



**Figure 1.** Flow diagram displaying process of article screening and retention for review. \*25 articles retained for review, reporting findings from 24 studies



**Figure 2.** Diagram to display the 6 key elements relating to women's fear of childbirth, and associations between each element