Early Labor Support: A Scoping Review Guided by Rogers' Science of Unitary Human Beings

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Abstract

This paper reports the results of a Rogers' Science of Unitary Human Beings (SUHB) guided scoping review of literature designed to extend knowledge regarding the needs of first-time birthing couples to remain at home safely in early labor and to determine gaps in knowledge to better serve and support first-time birthing couples. The Rogerian concept *wellbecoming* describes a birthing couples' knowing participation in the manifestations of evolving pattern. The dimensions of *wellbecoming* are wanting to know, feelings of anxiety and uncertainty, respect for autonomy, and desiring safety and security and comprise a preliminary situation-specific theory of *wellbecoming* for first time birthing couples experiencing early labor.

Childbirth is the most common reason for hospital admission among birthing persons in the United States (Martin et al., 2019). Since the timing of hospital admission influences the management and outcomes of labor, first-time birthing couples are encouraged to stay home during early labor and to seek admission to the hospital when they are in active labor (Roberts & Spiby, 2019). Early labor is defined as the time from labor onset to the beginning of active labor which occurs when the cervix is dilated 6 centimeters (Tilden et al., 2019). A hospital admission prior to the start of active labor is associated with obstetric interventions that are linked to an increase in cesarean deliveries among first-time birthing persons, hence the desire to delay admission to the hospital (Lagrew et al., 2018; Rota et al., 2018) However, a problem identified in the literature is that many birthing couples are admitted to the hospital when they are in early, but not active labor (Edmonds et al., 2018)

Several reasons have been reported as to why birthing couples make the decision to go to the hospital when in early labor. Many couples cannot distinguish symptoms of active labor from those of early labor even after being given information from healthcare professionals (Dixon et al., 2013; Hundley et al., 2017; Janssen & Desmarais, 2013). Conversely, the inability to

distinguish early labor symptoms from those of active labor may be due to little or no readily available information that might facilitate staying at home during early labor or it could be due to a lack of knowledge of the labor and birth process that stems from never having given birth (Beake et al., 2018; Eri et al., 2015; Hallgren et al., 1999; Johansson et al., 2012). This lack of knowing, coupled with the very real and progressive pain of normal physiologic birth (Edmonds & Zabbo, 2017; Edmonds et al., 2018) may contribute to a fear of mistakenly identifying the 'right time' to go to the hospital or birth center and suggests a need to examine what birthing couples require to remain at home safely during early labor (Low & Moffat, 2006; Nolan & Smith, 2010).

The purpose of this paper is to report the results of a Rogers' Science of Unitary Human Beings (SUHB) guided scoping review of literature designed to extend knowledge regarding the needs of first-time birthing couples to remain at home safely in early labor and to determine gaps in knowledge to better serve and support first-time birthing couples. Although many publications of scoping and other types of literature reviews do not include a guiding conceptual perspective, we maintain that some conceptual model always guides all forms of scholarly work (Fawcett, 2013) and that the result of each literature review constitutes a preliminary theory that can be tested (Fawcett, 2020).

Conceptual Model

The SUHB focuses on the pattern of human and environmental energy fields engaged in mutual process (Rogers, 1990, 1992). The relevant energy fields in this scoping review are first-time birthing couples and encompasses where they live and work; their relationships with family, friends, each other, and healthcare providers; and where they receive prenatal care and deliver their infant. Pattern is an abstract nonobservable phenomenon; however, manifestations of

pattern are observable in the form of perceptions, experiences, and expressions (Rogers, 1992). The results of the scoping review represent these pattern manifestations.

The Rogerian concept *wellbecoming* describes a birthing couples' knowing participation in the manifestations of evolving pattern and is dynamic which contrasts with wellbeing which is essentially a static state (Phillips, 2019). Wellbecoming is evident when birthing couples make the decision to labor at home in early labor and delay admission to the hospital or birthing center.

Methods

A scoping review is a method used to examine existing literature, identify gaps in knowledge, and explore next steps in a program of research (Arksey & O'Malley, 2005). We used Arksey and O'Malley's scoping review methodology to identify relevant studies, select studies for review, analyze the available studies, and summarize and report the results. With the exception of assessing articles for quality and rigor, a scoping review is similar to all other systematic reviews (Jesson et al., 2011).

Inclusion criteria were articles that examined first-time birthing couples' (mother, father, birthing persons, birthing parents) experiences of early labor prior to being admitted to the hospital, text in the English language, and primary sources. Exclusion criteria included midwives, doulas, healthcare professionals, and family members' experiences of first-time parents' experiences of early labor, non-English publications, and secondary sources.

Search methods

Four databases were searched (CINAHL Complete, PubMed, Science Direct, PsychInfo) to identify relevant existing English language studies regardless of date of publication. Each search started with the keyword, *early labor or latent labor support* followed by AND *women's experiences, views, or feelings* AND *first-time mothers, or primiparous, or primiparity,* or

father's role or father's experiences, views, or feelings. In addition, non-heteronormative language words were also searched*: birthing couples, birthing parents, birthing persons,* or *birthing partners AND experiences, views, or feelings AND early labor*. The Science Direct search was limited to journals focused specifically on childbirth including *Midwifery, Social Science and Medicine, Social Sciences Research, Journal of Obstetric, Gynecologic, and Neonatal Nursing* (JOGNN), and *Birth*. In addition, the reference lists of included literature were searched for additional relevant studies.

Search outcome

The search of electronic databases and hand searches yielded 2411 articles. Irrelevant records were removed first by review of title and key words, then by abstract, and finally by full texts of articles. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed (Figure 1). Of note, no studies used non-heteronormative language to examine first-time birthing couples', birthing parents', birthing partners', or birthing persons' experiences or perceptions during early labor.

Quality appraisal

In scoping reviews, the quality and rigor of the study methods is not appraised. Papers were selected and included in this review if birthing couples reported their perceptions and described their experiences of early labor.

Data abstraction

Data extraction from each paper included author/year, research design, sample size/setting, and first-time birthing parents' perceptions and experiences (Table 1). Birthing couples were differentiated between those who delivered an infant (birthing person) and those who supported the birthing person in that delivery (birthing parent). As such, we used the terms *woman,*

mother, she, and *her* interchangeably to apply to the birthing person who was pregnant or who gave birth, and *man, father, he, and him* to apply to the birthing parent who supported the birthing person in early labor. Recognizing that this is heteronormative language, we have chosen this approach given that was the language used in the manuscripts included in this scoping review.

Synthesis

Study findings were collated, summarized and reported within the context of the SUHB (Figure 2), and presented in a narrative format, one table and two figures.

Results

Description of sample

A total of 34 studies from high income countries were identified (Figure 1). The included studies were from Europe (n = 22), North America (n = 9), Asia (n = 2), and Australia (n = 1). The following research designs were included: qualitative (n = 20), quantitative (n = 10), mixed methods (n = 2), one quality improvement project, and one case report. Twenty-four studies included data from first-time mothers, 7 from first-time fathers, and 2 from both mothers and fathers. Sample sizes varied from 1 to 1,635 with a total of 5,674 participants (4968 women and 706 men).

Pattern Manifestations: Perceptions and experiences of early labor

Analysis of the content of the included studies yielded one concept with four dimensions (Figure 2). The concept is wellbecoming, which is a contemporary view of health within the context of the SUHB (Phillips, 2019). Wellbecoming describes a birthing couples' knowing participation in the manifestations of evolving pattern and is dynamic, which contrasts with the essentially static state of wellbeing (Phillips, 2019). Wellbeing is evident when birth couples

make the decision to labor at home in early labor and delay admission to the hospital or birthing center. The dimensions of wellbecoming are first-time birthing parents' pattern manifestations of their expressions of perceptions and experiences during early labor: wanting to know, feelings of anxiety and uncertainty, respect for autonomy, and desiring safety and security.

Wanting to know. Most first-time birthing couples *want to know* about the process of birth (Cheyne et al., 2007; Eggermont et al., 2017; Hallgren et al., 1999; Roberts & Spiby, 2019) and they *want to know* how to manage labor pain (Cappelletti et al., 2016; Carlsson et al., 2012; Edmonds et al., 2018; Nikula et al., 2015). The desire to want to know about labor represents a birthing couples' initial awareness of wellbecoming (see Figure 2). Expectant couples learn about birth and labor pain management from their health care provider and by attending childbirth education classes, reading books, using the internet, listening to family and friend's birth stories (Backstrom & Wahn, 2011; Cappelletti et al., 2016; Carlsson et al., 2012; Nolan et al., 2009; Roberts & Spiby, 2019), and for some first-time birthing parents, watching films on how to support the birthing person in labor (Hallgren et al., 1999). This *wanting to know* was also evident when couples in early labor chose to use electronic devices and smartphone digital applications to assist them in making the decision to go to the hospital (Cappelletti et al., 2016; Roberts & Spiby, 2019).

However, book knowledge alone was not enough to prepare a birthing parent to be emotionally and physically supportive during labor as many found it difficult to translate what they had learned into practice (Eggermont et al., 2017; Roberts & Spiby, 2019). A lack of labor and birth experience contributed toward first-time birthing couples fearing that they would not be able to manage or cope with progressive labor pain (Barnett et al., 2008; Edmonds et al., 2018; Low & Moffat, 2006) and was compounded when a first-time birthing parent, witnessing the

birthing person in pain even with supportive measures, felt helpless (Backstrom & Wahn, 2011; Chandler & Field, 1997; Nolan et al., 2012). As such, many first-time birthing parents felt they needed more guidance on how to support birthing persons emotionally and physically during labor (Yim, 2000).

Feelings of anxiety and uncertainty. Although first-time birthing persons who stayed home in early labor were more certain about the onset of active labor (Carlsson et al., 2012; Edmonds et al., 2018), many were uncertain if what they were experiencing was truly active labor (Beebe & Humphreys, 2006; Cheyne et al., 2007; Yim, 2000). Reasons frequently reported for not knowing if they were or were not in active labor included a labor experience that was different from textbook descriptions of labor or what they had learned in childbirth education classes (Beebe & Humphreys, 2006; Cheyne et al., 2007; Edmonds & Zabbo, 2017; Nolan et al., 2009a; Nolan Nolan & Smith, 2010). Uncertainty about not knowing if they were in active labor contributed toward birthing couples experiencing increased anxiety and this anxiety contributed to the decision to go to the hospital (Angeby et al., 2018; Carlsson, 2016; Edmonds et al., 2018; Floris & Irion, 2015; Low & Moffat, 2006; Marowitz, 2014; Nolan & Smith, 2010; Nolan et al., 2012). The pattern manifestations of anxiety and uncertainly reflect the decision to remain at home or go to the hospital or birth center when in early labor (Figure 2).

Additional factors affecting a birthing couples' decision to go to the hospital were their perception of childbirth as being either risky or a normal life event (Carlsson, 2016; Edmonds et al., 2018), along with their perception of control and perceived support in early labor (Ayers & Pickering, 2005). Although the decision to go to the hospital was usually made by the birthing person, it was often done in collaboration with the birthing parent (Barnett et al., 2008; Chandler & Field, 1997; Eri et al., 2010). However, first-time couples' feelings of *uncertainty* influenced

the birthing person's decision even when she thought she could manage to stay at home a little longer (Cheyne et al., 2007; Edmonds et al., 2018; Eri et al., 2010; Marowitz, 2014; Nolan & Smith, 2010).

Nevertheless, feelings of uncertainty were compounded and made more stressful if other family members had different opinions regarding the best course of action (Beebe & Humphreys, 2006; Barnett et al., 2008; Nolan & Smith, 2010) or if the birthing couple felt they had not received adequate suggestions regarding how to cope with pain in early labor (Barnett et al., 2008; Nolan et al., 2009b). Still, the intensity and progressiveness of labor pain led the couple to question if the labor might be further along (Edmonds et al., 2018; Marowitz, 2014; Nolan & Smith, 2010). Not knowing how far along in labor the birthing person might be, created additional concerns for the birthing parent such as calculating the distance from the home to the hospital and the amount of time it would take to get to the hospital (Edmonds et al., 2018; Nolan et al., 2012).

Respect for autonomy. First-time birthing persons described feeling powerful when they had a sense of authority over their bodies and freedom to birth the way they wanted to (Carlsson et al., 2012); yet, some birthing persons vacillated between feeling powerful and powerless in early labor (Carlsson et al., 2009). Respect for autonomy in childbirth was manifested when birthing persons described feeling accepted, their decisions were supported even if a decision went against a healthcare professionals' recommendation of care, and when they received individualized care (Carlsson, 2016; Marowitz, 2014; Nikula et al., 2015; Roberts & Spiby, 2019). A birthing parent indicated they felt respected by healthcare professionals when they were listened to and allowed to ask questions which strengthened their connection with a birthing person (Backstrom & Wahn, 2011; Johansson et al., 2012).

Conversely, examples of autonomy not respected were evident when a birthing person felt embarrassed when their experiences of early labor were not taken seriously by healthcare professionals at the hospital (Eri et al., 2010; Henderson & Redshaw, 2017), when they were left out of decision making (Backstrom & Wahn, 2011; Johansson et al., 2012), or when a birthing parent was not viewed as part of a laboring couple by healthcare professionals (Backstrom & Wahn, 2011; Chandler & Field, 1997). This pattern manifestation reflects the need of birthing couples to have their autonomy respected in their desire for wellbecoming (see Figure 2).

Desiring safety and security. Birthing couples expressed the desire to have a healthy baby and birthing person, quick labor, and little pain (Kao et al., 2004) and want to feel safe and secure. For some birthing persons, this meant relinquishing control and being in a hospital rather than laboring at home (Carlsson, 2016; Carlsson et al., 2009). However, being denied admission when in early labor was made more stressful when a woman was in pain (Green et al., 2012). First-time birthing partners also described early labor as a balancing act between wanting to be present and wanting to step back and let others take over (Backstrom & Wahn, 2011), yet they felt safe and in control, and less helpless and panic-stricken, if they perceived support, guidance, and reassurance by the healthcare professional (Backstrom & Wahn, 2011; Hallgren et al., 1999; Johansson et al., 2012; Nolan et al., 2012).

Relationships with others was important to overall perceptions (Ayers & Pickering, 2005; Beebe & Humphreys, 2006) and contributed to perceptions of safety and security (see Figure 2). For example, when labor began, many birthing couples engaged with healthcare professionals, family, and friends to let them know what was happening, seek reassurance, and share their excitement about the forthcoming birth (Cappelletti et al., 2016; Carlsson et al., 2012; Nolan et al., 2012). When in early labor, it was not unusual for many couples to make a few phone calls to

health care professionals (Marowitz, 2014). However, if their telephone conversations were not viewed as satisfactory, first time birthing persons had lower emotional wellbecoming scores (Angeby et al., 2018). Examples of supportive actions in early labor by healthcare professionals that could increase a couples' overall wellbecoming included normalizing the birthing couple's birth experience (Carlsson et al., 2009; Edmonds et al., 2018; Eri et al., 2010); acknowledging their labor experience as unique (Green et al., 2012; Low & Moffat, 2006); giving praise (Nikula et al., 2015) encouraging the laboring couple to ask questions and give them explanations that were understandable, detailed, accurate and tailored to meet their individual needs (Backstrom & Wahn, 2011; Eri et al., 2010; Green et al., 2012; Nikula et al., 2015); providing reassurance (Henderson & Redshaw, 2017); and reinforcing strategies to cope with labor pain (Cappelletti et al., 2016; Carlsson et al., 2012).

Other measures implemented in early labor and associated with positive birth experiences and safety and security included home visitation by nurses (Janssen & Desmarais, 2013), doula support (Nolan et al., 2012), and telephone conversations greater than 5 minutes in length with midwives (Green et al., 2012). Mixed results were found for use of early labor lounges in a hospital with the findings of one study indicating its use was associated with woman-centered care and delayed admission (Breman et al., 2019) and the findings of another study indicating worse birth outcomes (Williams et al., 2019). An Early Labor Walking Path Tool was also found to be effective in delaying admission for laboring couples who arrived at a hospital in early labor and could not go home (Morelli & MacKeil, 2018).

Discussion

The SUHB provided a useful conceptual context to guide the scoping review of the 34 studies and extraction of the concept and its dimensions, which make up what we consider a preliminary

situation-specific theory of wellbecoming for first-time birthing couples experiencing early labor. Situation-specific theories, unlike grand or middle-range theories, reflect specific nursing phenomena of a given population and can be used to guide nursing practice (Im & Meleis, 1999).

Our findings were similar in many respects and different in other respects to two qualitative meta-syntheses that examined either first-time birthing persons' or birthing persons, labor partners, and midwives' experiences or perspectives in early labor. In our review, first-time birthing couples expressed *wanting to know* about the birth process and how best to manage labor pain; this finding was also reported by Beake and colleagues (2018) and to a lesser extent by Eri and colleagues (2015) as they only included the experiences of birthing persons and not birthing couples in their review. *Feelings of anxiety and uncertainty* in early labor were also evident when Beake and colleagues (2018) and Eri and colleagues (2015) reported the mismatch between what birthing persons were told to expect in early labor and what they experienced, especially as it related to labor pain. However, only Beake and colleagues reported increased anxiety among birthing persons due to lack of clarity or direction provided to them when in early labor.

All human beings are born with human dignity and their decisions should be respected and honored (Jacobson, 2007). Although Beake and colleagues and Eri and colleagues did report in more general terms that birthing persons should be respected and treated as individuals and gave examples of the need for birthing persons to be listened to, neither review directly identified the need to respect birthing couples' autonomy. In addition, neither review specifically identified the desire of birthing couples to feel safe and secure; however, Beake and colleagues did report that birthing persons wanted clear and consistent advice to make them feel safe and confident in decision making.

Other differences between our scoping review and the two identified reviews, is that we used a conceptual framework to guide our review and identified wellbecoming as a concept to better understand the experiences of first-time birthing couples in early labor. In addition, we viewed the birthing couple as a dyad and focused exclusively on first time birthing couples' experiences and perceptions of early labor.

Implications for Nursing Practice

This scoping review revealed first-time birthing couples' perceptions and experiences of early labor that lead to suggestions for nursing practice. Noteworthy, however, is that the scoping review did not focus explicitly on practice implications. Thus, we offer these implications as speculation about what might be effective practices within the context of the SUHB.

At the core of the SUHB are pattern manifestations of the human being-environment mutual process (Rogers, 1990, 1992). Based on the findings from this review, many first-time birthing couples want to know about the labor process and how to manage pain at home, but when labor started and the pain increased, many described feelings of anxiety and uncertainty leading them to make the decision to go to the hospital or birth center when still in early labor. This finding suggests that nurse-led interventions are indicated prior to birthing couples making the decision to go to the hospital in early labor.

Utilizing the SUHB practice methodology *pattern manifestation knowing and appreciation—assessment* (Fawcett & DeSanto-Madeya, 2013) nurses continuously assess where first-time birthing couples are as they evolve *wanting to know* and *desiring safety and security*. In addition to assessing first-time parents' needs, the nurse also may assess systems of care. For example, how is childbirth education delivered, what content on early labor is provided during childbirth

education, what information is provided about early labor during a prenatal visit, and do either of these two formats meet the needs of first-time birthing couples?

Following each assessment, nurses and first-time birthing couples engage in *voluntary mutual patterning* (Fawcett & DeSanto-Madeya, 2013) to address desired knowledge and support gaps. For example, if a first-time parent has limited knowledge or confidence performing non-invasive energy modalities to manage pain at home, then the nurse could help them to learn the benefit of a particular non-invasive energy modality, demonstrate how to do a particular energy technique of interest to them, and have the couple perform 'teach-back' to demonstrate learning and comfort in use of a particular energy modality. Some non-invasive energy modalities that could be utilized to manage pain include therapeutic touch, yoga, acupressure, meditation, massage, Reiki energy, and visualization. However, although first-time birthing couples may develop a working knowledge about specific energy modalities, they may not have the confidence or the skills to perform these modalities on their own. In such situations, nurses need to refer first-time birthing couples to care providers who have these skills, for example, Reiki. Additional therapeutic support services could include the integration of a labor coach in early labor to guide, reassure, and recommend individual energy modalities to manage pain in early labor.

Through the process of continuous mutual sharing and engagement, the SUHB practice modality *pattern manifestation knowing and appraisal---evaluation* is used to evaluate the effectiveness of different interventions and explore how each contributes to first-time birthing couples experiencing wellbecoming in early labor (Fawcett & DeSanto-Madeya, 2013). This assessment and evaluation could also include quality improvement projects to evaluate the effectiveness of re-imagined childbirth education classes and prenatal visits based on first-time parents' needs and expressed desires. Thus, the theory of early labor could be used to guide

development and testing of non-invasive energy modalities that might better prepare first-time birthing couples to perceptions of pain during early labor, determine what type of support a laboring couple needs to feel safe and secure during early labor, and explore other non-invasive energy modalities that are effective at repatterning a first-time birthing couples' evolution from *wanting to know* toward *desiring safety and security* and experiencing wellbecoming.

Implications for Research

The purpose of this scoping review was to identify gaps in knowledge and generate a middle-range theory to guide further knowledge development. The theory of early labor indicates a desire for first-time birthing couples to feel safe and secure in early labor. Unanswered questions identified in our review include: What is the relation between wanting to know and desiring security and safety, and is this relation mediated by feelings of anxiety and uncertainty and respect for autonomy? To what extent does wellbecoming reflect or represent feelings of power as knowing participation in change (Barrett, 2010). Future studies designed to answer these questions are warranted**.**

Limitations

The findings of this scoping review are limited in that all the included studies were from high income countries and were published in English. Most of the studies were conducted in Europe, predominantly in the UK, and very few studies included racial or ethnic demographics or cultural indicators. Therefore, this review may not have captured the pattern manifestations of diverse populations of first-time birthing couples. For example, the birthing parents included in this review wanted to be present during labor, which may not accurately reflect the views of all birthing parents nor did it consider different cultural perspectives of birthing parents' presence during early labor.

Another limitation is that no included studies incorporated birthing persons with disabilities, same sex couples and persons with different gender identities and their perceptions of and experiences during early labor. Additionally, as gender-neutral language continues to evolve in the scientific communities, and as future studies and manuscripts acknowledge a greater diversity of birthing couples, birthing persons, birthing partners, and birthing parents, we are dedicated to adjusting our language going forward.

Conclusions

The theory of early labor captures first-time birthing couples' perceptions and experiences in early labor as a birthing couple within the context of the SUHB**,** and can be used to guide nursing practice, education, and future research. Although the results of this scoping review indicate that first-time birthing couples are more likely to experience wellbecoming in early labor when they feel safe and secure, more research is needed to guide development and testing of non-invasive energy modalities to determine their effectiveness at repatterning a first-time birthing couples evolution from *wanting to know* toward *desiring safety and security* in early labor.

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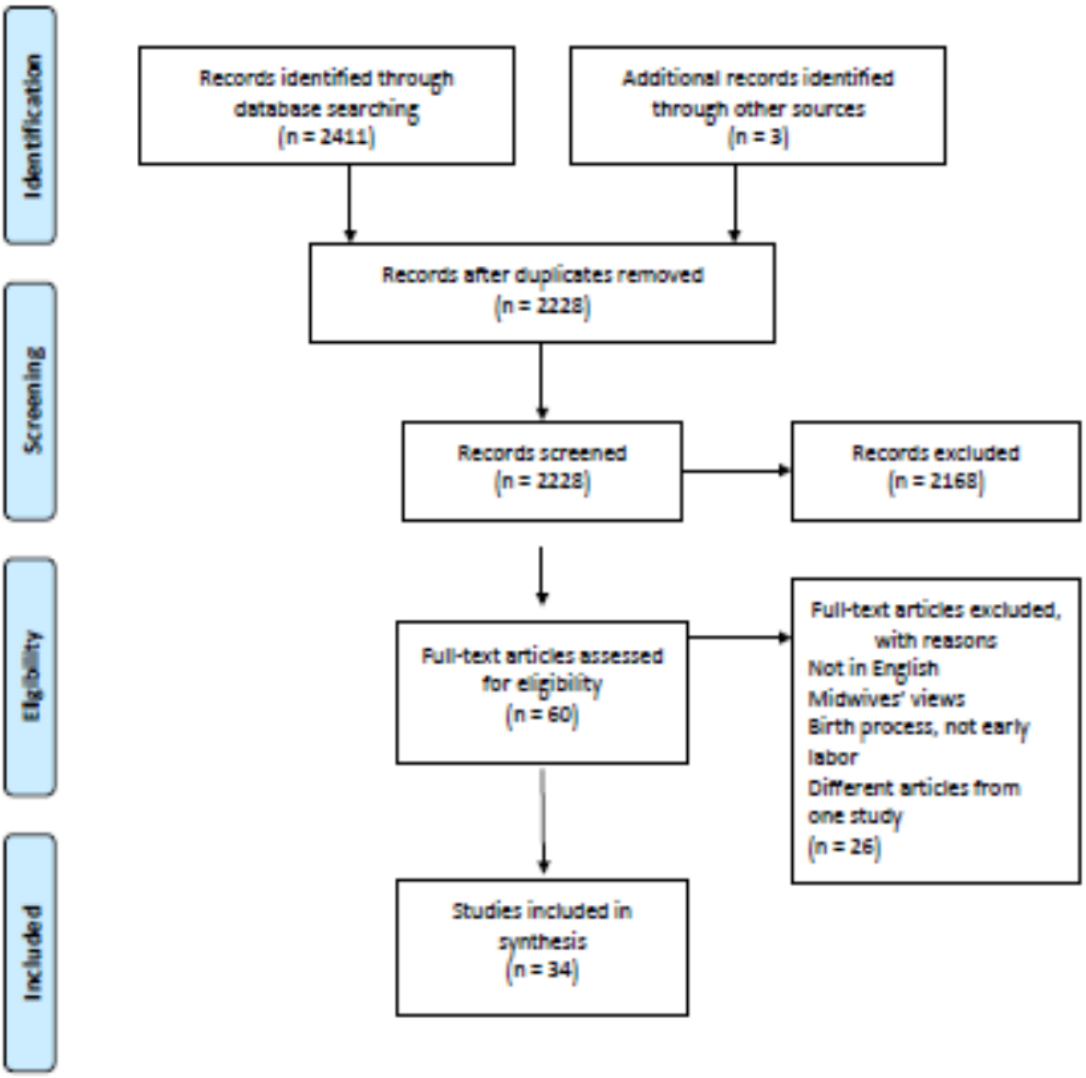
Figure 1. Flowchart



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement.* PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

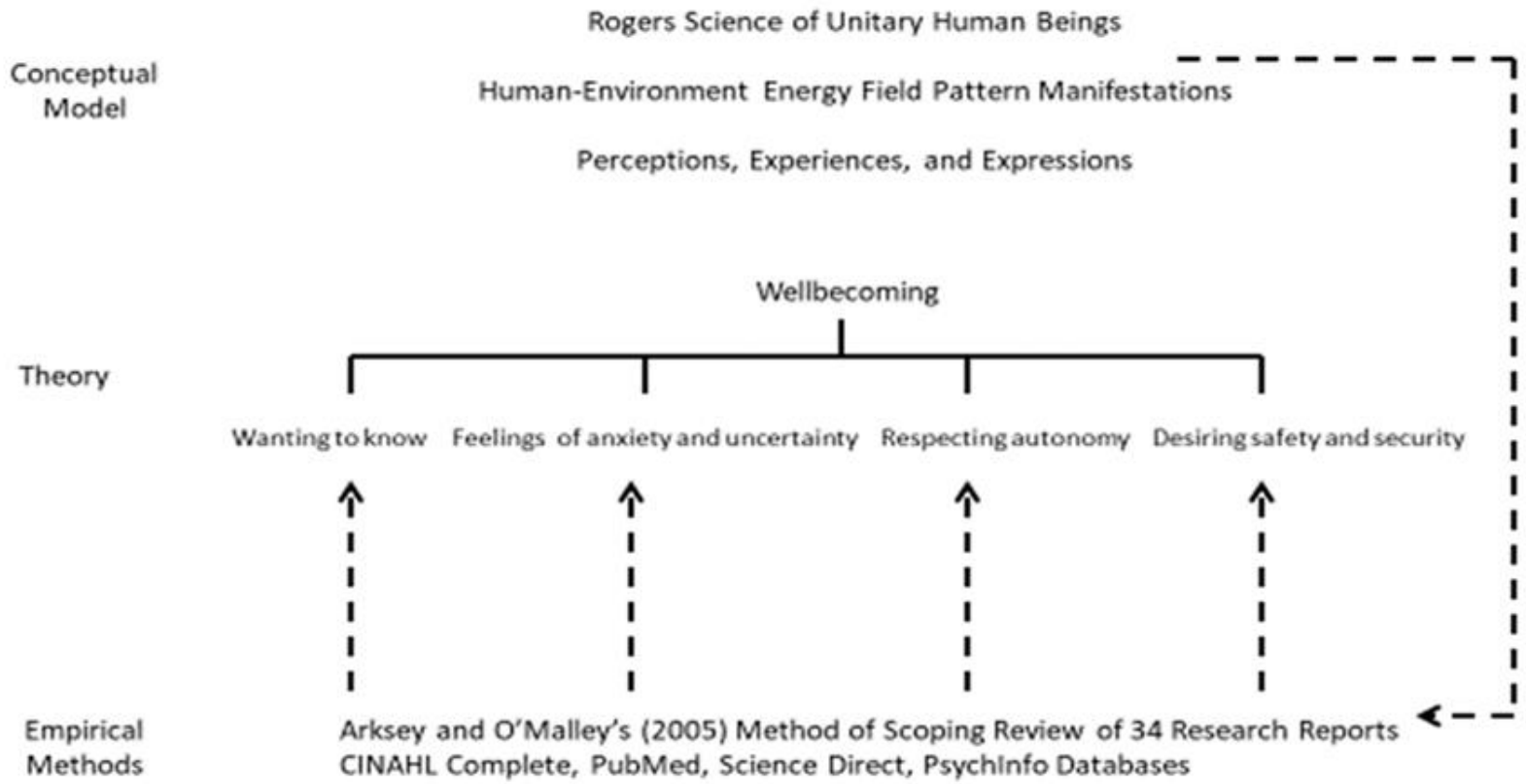


Figure 2. Conceptual-theoretical-empirical structure for the preliminary situation-specific theory of wellbecoming for first-time birthing couples experiencing early labor

Table 1. Evidence Table for Theory of Early Labor

Author/country	Research Design	Sample size	Mothers/Fathers	Experiences and Perceptions
Angeby et al. (2018) [Sweden]	Quantitative Psychometrically tested the Early Labour Experience Questionnaire	N = 754 women n = 344 first time mothers	Mothers	Feeling excited and feeling tense had the highest mean values; feeling relaxed had the lowest mean value Dissatisfaction with telephone contact scored lower on the emotional wellbeing factor compared to women who felt satisfied (p = .001)
Ayers & Pickering (2005) [UK]	Quantitative Expectation and Experience of Birth Scale State-Trait Anxiety Scale	N = 252 women n= 132 first time mothers	Mothers	Anxiety in pregnancy was associated with expecting more negative expectations during birth, less control, less support, and less confidence to cope. Nulliparous women expected and experienced more negative emotions, less control, and perceived birth as traumatic and challenging compared to multiparous women. Support from partner, midwife, and doctor affected the relationship between expectations and experiences of birth
Backstrom & Wahn (2011) [Sweden]	Qualitative	N = 10 first time fathers	Fathers	Main theme: Being involved or being left out. Good support was perceived as being able to ask questions, interacting with the midwife and partner, and choosing to be involved or to step back.
Barnett et al. (2008) [Scotland]	Qualitative	N = 6 first time mothers	Mothers	Themes: influence of others in making decision to go to the hospital, the need for reassurance, coping/pain worse than anticipated, and undervaluing the latent phase.
Beebe & Humphreys (2006) [US]	Qualitative/ethnography	N =23 first time mothers	Mothers	Incongruence between expectations and actual experiences. Uncertainty about labor onset as it was happening—experiences different from class. The importance of available support systems. Advantages and disadvantages to going to the hospital and this decision was made with others. Fear of going to hospital too early and losing control. When at home, were in control.
Breman et al., (2019) [US]	Quantitative Birth Satisfaction Scale-Revised Early Labor Lounge (ELL)	N = 67 first time mothers, low risk n = 29 Early Labor Lounge users	Mothers	7.1% (n = 2) of ELL users had a cesarean compared to 21.2% (14) of non-ELL users. Similar BSS-R scores (28.2 vs. 28.7)
Cappelletti et al. (2016) [Italy]	Qualitative (phenomenology)	N = 15 first time mothers, low and high risk	Mothers	Themes: Recognizing signs of early labor, coping with pain at home, seeking reassurance from healthcare professionals. Many sources of information to learn about early labor, and monitored uterine activity with smartphone apps.
Carlsson et al. (2009) [Sweden]	Qualitative (grounded theory)	N = 18 women n = 11 first time mothers	Mothers	Themes: Having difficulty managing the uncertainty, suffering from pain to no avail, oscillating between powerfulness and powerlessness. Admission in early labor was a need for handing over responsibility for the labour which may have given women a sense of security and control. Need to confirm the normality of the slow process, information, and support. Examples provided from mostly first-time mothers.

Carlsson et al. (2012) [Sweden]	Qualitative (constructivist Grounded theory)	N=19 first time mothers	Mothers	Theme: Maintaining power gave a sense of authority over their bodies which was enhanced when sharing experience with others, calling on phone. Many sources of acquiring information, including the internet. Importance of place and how this can affect a woman's experience. Autonomy should included making decision as to when to seek care during labor.
Carlsson (2016) [Sweden]	Qualitative (grounded theory): Secondary data analysis of 2 previous qualitative studies (2009 & 2012)	N = 37 women (transcripts) n = 18 (first study, 2009) n = 19 (second study, 2012) Total first-time mothers: 30	Mothers	Theory: Women need to be in a safe and thus secure place during early labor. There is an interconnection between how women construct childbirth as either a medical or natural event and what geographical space they believe is the safest place to be in during early labor
Chandler & Field (1997) [Canada]	Qualitative	N = 14 first time fathers n = 8 (prior to birth) n = 6 (after the birth)	Fathers	Fathers expected to be treated as part of a laboring couple but were relegated to a supporting role and/or excluded. Anguish over seeing a loved one in pain and fathers wanted more knowledge so they could help their partner. Professionals need to support the couple, not just the mother. The decision to go to the hospital made jointly.
Cheyne et al. (2007) [UK]	Qualitative	N = 21 n = 16 first time mothers	Mothers	Themes: No clear expectations about the start of labor; uncertainty about being in labor; anxiety and pain, wanted to be at home in early labor---more comfortable. Pain was the primary reason for going to the hospital along with a need for reassurance, and that their partner wanted them to go even though they thought they could manage coping at home.
Edmonds & Zabbo (2017) [US]	Qualitative	N = 21 first time mothers, low risk	Mothers	Women are uncertain about identifying labor onset. Women's own diagnostic criteria of labor onset and progression is more varied than textbook definitions. Contractions and pain were the most commonly reported symptoms. Importance of detailed anticipatory guidance
Edmonds et al. (2018) [US]	Qualitative	N = 21 first time mothers,low risk	Mothers	Factors considered when making the decision to go to the hospital or stay at home in early labor included the degree of certainty with labor onset, ability to cope with labor pain, influence of social network members, health care provider advice, and concerns about travel to the hospital. Perception of childbirth risk and the need for reassurance about normalcy of symptoms also factored into decision.
Eggermont et al. (2017) [Belgium]	Quantitative Labour and Childbirth Needs Questionnaire	N = 72 fathers, vaginal birth n = 33 first-time fathers	Fathers	82% of the first-time fathers wanted to be involved in the birth; 88% of first-time fathers expressed a need for information about the process of birth; 54% on how to support partner physically during labor and birth, and 48% on how to support her emotionally during birth. These needs were not always met by health professionals. Often, the information they received was not what they felt they needed to learn.

Eri et al. (2010) [Norway]	Qualitative	N = 17 first time mothers	Mothers	Negotiation on 2 fronts---one with partner, and the other with hospital. Often, it was the woman who wanted to delay contact with the hospital. Arriving at the hospital too early was seen as embarrassing. Experiencing vulnerability especially with face-to-face interactions at the hospital.
Floris & Irion (2015) [Switzerland]	Quantitative -State-Trait Anxiety Inventory -McGill Pain Scale -Labour Agentry Scale (LAS)	N = 97 first time mothers	Mothers	Women who were in active labor had higher anxiety scores compared to those in latent/early labor. The degree of pain was associated with a higher anxiety score. Women in latent labor had lower anxiety scores and higher LAS scores (emotional) than women in active labor
Green et al. (2012) [UK]	Mixed methods study (qualitative)	N = 46 first time mothers, low risk	Mothers	Unmet needs related to telephone advice and the need for detailed and accurate information. There needs to be a clear need for when to call back and/or attend the unit. Calls less than 5 minutes were associated with more dissatisfaction as was being sent home when in pain,
Hallgren et al. (1999) [Sweden]	Qualitative	N = 11 first time fathers	Fathers	Men expressed wanting to be involved as well as fear of participating. They prepared themselves in various ways—friends, family, literature, and films showing how to give support. All men felt unprepared for the intensity of childbirth, especially the pain their partners experienced. Overwhelming feelings of helplessness. Some felt excluded by the staff. Men appreciated support from midwives
Henderson & Redshaw (2017) [UK]	Mixed methods	N = 3099 women, vaginal birth n = 1321 first time mothers	Mothers	Nulliparous women more likely to be worried about not knowing when labor would start. Nulliparous women wanted more support and reassurance compared to multiparous women. Open-ended themes: felt foolish by hospital when not admitted and this increased their anxiety.
Janssen & Desmarais (2013) [Canada]	Quantitative	N = 423 first time mothers, low risk	Mothers	Women who received home visits rated their labor experience more positively compared to telephone support
Johansson et al. (2012) [Sweden]	Mixed methods	N = 604 fathers n = 391 first time fathers n = 436 repeat fathers n = 111 same fathers, Phase II, qualitative	Fathers	About ½ of first-time fathers felt left out of decision making. Fathers felt safe and gained a sense of control when the healthcare professionals were supportive to them.
Kao et al. (2004) [Taiwain]	Quantitative Childbirth Expectations Questionnaire	N = 200 couples n = 122 first time parents	Mothers & Fathers	Top 3 childbirth expectations for mothers and fathers: mother and baby would be safe, the labor will go smoothly and fast, and they wanted to avoid labor pain. No significant differences in childbirth expectations between expectant parents
Low & Moffat (2006) [US]	Qualitative	N = 24 first time mothers	Mothers	Pain the main reason for decision to go to the hospital, but not always an indicator to be admitted. Women feared making a mistake in identifying the right time to go to the hospital. Every labor is unique

Marowitz (2014) [US]	Case report	N = 1 first time couple	Mother and Father	Many phone calls to midwife. Laboring at home is not always relaxing and women are not always comfortable. Increasing uncertainty and anxiety with pain. Partner supported woman in her desire to go to the hospital, even though she was not in active labor. Women's individual circumstances and preferences must be considered along with shared decision making.
Morelli & MacKeil (2018) [US]	QI project	Not available		Reduced cesarean deliveries to 12% and decreased early admission to labor unit
Nikula et al. (2015) [Finland]	Quantitative	N = 260 women n = 85 first time mother	Mothers	Made me feel cared about as an individual (99.6%). Midwifery behaviors that were most helpful: gave praise, answered questions truthfully, treated me with respect, supported my decision making, and made me feel safe.
Nolan, Smith, & Catling (2009a) [UK]	Open-ended question on survey "Any further comments?"	N = 715 women responded to open ended question; 74% first time mothers in larger survey	Mothers	First time mothers responded that: Preparation for early labor had been misleading and led to unrealistic expectations. Women want to be prepared, attended classes, read, talked to midwives about giving birth. Midwives had prescriptive ideas about the timescale of labor and did not listen to what the women were trying to tell them. Each birth is unique
Nolan et al. (2009b) [UK]	Quantitative	N = 2,210 n = 1634 first time mothers	Mothers	No one gave them suggestions as to how to cope with labor pain at home.
Nolan, Catling, & Smith (2012) [UK]	Open-ended question on survey: "tell us anything else about the time you spent at home with your partner before going to the hospital?"	N = 263 fathers n = 135 first time fathers	Fathers	Fathers actively involved in the decision to go to the hospital. Main reason for their anxiety was the pain his partner was in. Distance from home to hospital was a concern and impacted decision to go to the hospital. Many fathers felt excluded when partners went into labor; felt their presence was neither needed or appreciated. Having a doula made things calm. Communication with health professionals via telephone impacted a father's sense of wellbeing as they became less fearful and coped better and felt less helpless. Fathers wished to be better prepared to help make partners more comfortable before they needed to go to the hospital.
Nolan & Smith (2010) [UK]	Qualitative	N = 8 n= 7 first time mothers	Mothers	Need for reassurance in early labor, uncertainty—sense of not knowing, pressure from family to go to the hospital even though they felt they could manage at home, family members worried which increased their anxiety
Roberts & Spiby (2019) [UK]	Qualitative	N = 12 n= 11 first time fathers	Fathers	Relied on partners to decide when to go to the hospital. Saw their role as a supportive one. Used apps on their phones to time contractions. Men cited women's autonomy as reasons they supported women's decisions, even if it went against the advice of the healthcare professionals. Early labor described as the 'calm before the storm.' Antenatal advice caused some men to worry about judging the right time to travel to the hospital. They found it hard to implement what they had learned in antenatal classes

Williams et al. (2019) [Australia]	Quantitative	N = 747 (post intervention) n = 484 (first time mothers)	Mothers	No statistically significant differences noted for length of stay in Pregnancy Assessment and Observation Unit; postpartum hemorrhage, genital trauma, mode of delivery, episiotomy, or in epidural use. Statistically significant increases in amniotomy and NICU admissions post intervention.
Yim (2000) [Hong Kong]	Quantitative State-Trait Anxiety Inventory Visual Analogue Scale	N = 45 first time mothers	Mothers	Women's ratings of partners' practical support were significantly lower than their ability to provide emotional support.