European Journal of Obstetrics and Gynecology 282 (2023) 146–154

Contents lists available at ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.journals.elsevier.com/european-journal-of-obstetrics-and-gynecology-and-reproductive-biology

Negative childbirth experience in relation to mode of birth and events during labour: A mixed methods study

Frida Viirman [a,*], Andrea Hess Engström [a,b], Josefin Sjömark [a], Susanne Hesselman [a,c], Inger Sundström Poromaa [a], Lisa Ljungman [a], Agneta Skoog Svanberg [a], Anna Wikman [a]

[a] Department of Women's and Children's Health, Uppsala University, Akademiska sjukhuset, SE-75185 Uppsala, Sweden
[b] Centre for Clinical Research Västerås, Västmanland County Hospital, SE-72189 Västerås, Sweden
[c] Centre for Clinical Research Dalarna, Nissers väg 3, SE-79182 Falun, Sweden

ARTICLE INFO

Keywords:
Childbirth experience
Birth satisfaction
Labour
Psychological birth trauma
Women

ABSTRACT

Objective: To explore descriptions of negative childbirth experience in relation to mode of birth and events during labour.

Design: A descriptive study using a convergent mixed methods design. Written responses to open-ended online questions regarding negative childbirth experience were explored using qualitative content analysis. Generated sub-themes were quantified, and stratified on mode of birth and events during labour.

Participants and setting: 112 women with low ratings of overall childbirth experience, participating in a randomised controlled trial evaluating internet-based cognitive behavioural therapy in Sweden. Qualitative data were collected before randomisation, three months postpartum.

Results: Four sub-themes emerged from the qualitative analysis: *Experiencing fear-based emotions, Experiencing physical distress, Being affected by caregivers' and partner's behaviour* and *Being affected by bad facilities and poor organisation*. Only small differences were found when stratifying sub-themes on mode of birth and events during labour. Regardless of mode of birth and events during labour, the childbirth experience was dominated by fear-based emotions.

Key conclusions and implications for practice: Mixed-methods analyses demonstrate the challenges in understanding negative childbirth experience in relation to mode of birth and specific events during labour, with results clearly showing the multifaceted nature of this concept. The central role of fear in relation to negative childbirth experience should be considered when designing support during and after labour, to prevent adverse effects of the childbirth experience.

Introduction

Giving birth is a momentous event in a woman's life, with the potential to strengthen her self-confidence and self-esteem in the long-term [1]. However, at least one in ten women experience childbirth as negative, or even traumatic [2]. Since experience is a subjective evaluation, only the woman herself can determine whether her childbirth was positive or negative, meaning that even births without medical complications can be perceived as negative [3].

A negative childbirth experience can have adverse short- and long-term consequences for the woman and her family. It has been linked to breastfeeding problems, poor self-rated health, post-traumatic stress disorder and postpartum depression [4–7]. Negative childbirth experience is the major cause of fear of subsequent childbirth, and can affect future reproductive decisions, where affected women may refrain from or delay subsequent pregnancy [8,9].

Women's perceptions of childbirth as negative or traumatic have been explored in qualitative studies, describing experiences of lack of information and involvement in decision-making, sense of powerlessness, lack of control and not being respected by the care providers, resulting in feelings of being treated inhumanely [10]. Moreover, fear for one's own or the infant's life, together with a high intensity of pain and a lack of support, have been found to influence the childbirth experience [11]. Quantitative findings reveal operative modes of birth, such as unplanned caesarean section (CS) and instrumental vaginal birth, as being highly correlated with negative childbirth experience.

* Corresponding author.
E-mail address: frida.viirman@kbh.uu.se (F. Viirman).

https://doi.org/10.1016/j.ejogrb.2023.01.031
Received 19 October 2022; Received in revised form 6 January 2023; Accepted 24 January 2023
Available online 27 January 2023

Other known risk factors are poor self-rated health prior to pregnancy, primiparity, psychiatric care during pregnancy, induction of labour, prolonged labour, and the infant being transferred to the neonatal ward [2,12].

The role of some events during labour still remains unclear in connection to negative childbirth experience. Insufficient pain-relief from epidural analgesia can result in high levels of pain, leaving the woman in a state where she feels she has no control over her situation [13,14]. Yet, objective ineffective epidural analgesia has not been specifically investigated in relation to childbirth experience. Likewise, the impact of intrapartum foetal monitoring techniques on childbirth experience warrants further research, as well as prolonged second stage and major postpartum haemorrhage. A prolonged second stage of labour is associated with increased risk of maternal adverse outcomes such as anal sphincter injury, postpartum haemorrhage, and endometritis [15]. However, the relation to childbirth experience is unknown, although prolonged labour *in general* is connected to negative childbirth experience [2,16]. Moreover, it is unknown how mode of birth and specific events during labour interact and correspond to women's descriptions of negative childbirth experience. Integrating qualitative and quantitative findings enables a deeper understanding of complex phenomena [17]. This approach has rarely been used in this field; in a recently published systematic review concerning predictive factors for childbirth experience, only one of 28 included studies used a mixed methods design [18].

Since an unprocessed negative childbirth experience can have detrimental effects on the woman and her family, it is of particular interest to study women who have not spontaneously recovered from the experience, and to compare and synthesise quantitative and qualitative data from one sample. Therefore, the aim of this study was to explore descriptions of negative childbirth experience in relation to mode of birth and events during labour among women affected by negative childbirth experience eight weeks postpartum.

Methods

Study design and setting

This was a cohort study with a mixed-methods convergent research design. Qualitative and quantitative data were collected from the same sample and analysed separately, before being combined and interpreted to get a deeper understanding of the research question, as described by Creswell & Plano Clark [17]. The study was conducted in Sweden, where care during pregnancy and childbirth is funded by taxation, and hence available free of charge to all citizens. Births almost exclusively take place at obstetrician-led birth clinics at one of 44 hospitals, which differ in size, but provide the same model of care. Registered midwives are the main care providers, accompanied by assistant nurses, and autonomously care for women with uncomplicated pregnancies and births. Obstetricians supervise complicated pregnancies and/or labour, but attend mainly operative births. Midwives assist all birthing women, regardless of mode of birth, but are often responsible for more than one woman in labour simultaneously. Current practice includes screening for negative childbirth experience, by women rating overall experience on a numeric rating scale before discharge from the hospital.

Material and procedure

This study builds on secondary analysis of data collected as part of the Juno trial, a randomised controlled trial (RCT) evaluating internet-based cognitive behavioural therapy as prevention of post-traumatic stress symptoms following childbirth [19]. Eligible for participation in the Juno trial were all Swedish-speaking women aged $\geq$ 18 years, who gave birth to a live infant at one of four public hospitals in Sweden, and rated their overall childbirth experience $\leq$ 5 on an eleven-point numeric rating scale of 0–10 before discharge from the hospital, or, regardless of childbirth experience, gave birth by immediate CS performed under general anaesthesia less than 15 min after decision on CS, or had a postpartum haemorrhage of $\geq$ 2000 ml. Eligible women were informed about the Juno trial by a telephone call eight weeks postpartum. During the conversation, women were asked about how they coped with their childbirth experience, and women negatively affected by it were offered participation. Those interested in participating received the study invitation by post. Recruitment lasted between September 2013 and January 2018.

In the present study, only pre-randomisation, baseline data (collected at approximately-three months postpartum) from 112 women who were recruited between September 2013 and December 2017 from one of the study sites (Uppsala), and rated overall childbirth experience $\leq$ 4, were included in the analysis. Childbirth experience $\leq$ 4 was used as cut-off for inclusion in the present study, in line with previous studies [20,21]. Women from other study sites were excluded due to lack of access to medical records. Births by planned CS were excluded, since the aim was to explore negative childbirth experience in relation to events during labour. The inclusion process is illustrated in Fig. 1, with the analysis process, which is described below.

Quantitative data collection and analysis

Quantitative data concerning background characteristics (age at childbirth, country of birth, education, parity) and labour, including specific events during labour, were derived from electronic medical records. Events during labour included: mode of birth (categorised as spontaneous vaginal birth, vacuum extraction [no forceps were used during the study period], unplanned CS or immediate CS performed under general anaesthesia less than 15 min after decision), ineffective epidural analgesia (categorised as yes [insufficient pain-relief documented in electronic medical records by midwife and/or anaesthesiologist] or no, which included not having received epidural analgesia), foetal distress during labour (defined as sampling of scalp blood for pH and lactate measurements, yes or no), prolonged second stage of labour (defined as $\geq$ 3 h of full dilatation to birth, passive and active phase included, in accordance with professional guidelines [22]), yes or no), and postpartum haemorrhage $>$ 1000 ml (yes or no).

Information on health status was collected from online questionnaires completed at approximately-three months postpartum (median 14 weeks). Self-rated health was measured by the EQ-5D visual analogue scale (EQ-VAS), with anchors 0 = "worst imaginable health state" and 100 = "best imaginable health state" [23]. Postpartum depression was defined as a score $\geq$ 12 on the Edinburgh Postnatal Depression Scale [24,25]. The Traumatic Event Scale (TES) was used to classify participants as having probable post-traumatic stress disorder following childbirth (PTSD-FC) according to the DSM-IV criteria for post-traumatic stress [26,27].

Descriptive statistics were used to calculate frequencies of studied events during labour, as well as characteristics of the sample, and were presented as means and standard deviations (SD) or numbers (n) and percentages (%). All statistical analyses were performed using IBM SPSS Statistics version 28.0 (IBM Corp., Armonk, N.Y., USA).

Qualitative data collection and analysis

Qualitative data were mainly derived from one question with fixed answers and from written responses to two open-ended questions in the extensive online questionnaire, completed by all participants at approximately-three months postpartum as follows. After having answered sociodemographic and pregnancy-related questions, the women marked which of 17 fixed-answer qualitative statements they considered to be the most difficult, negative or traumatic events during labour. These events were compiled from previous research [28] and clinical experience and included experiences such as feeling abandoned, confused and scared, or were related to, for instance, poor communication or lack of support (Supplementary Table 1). This item was

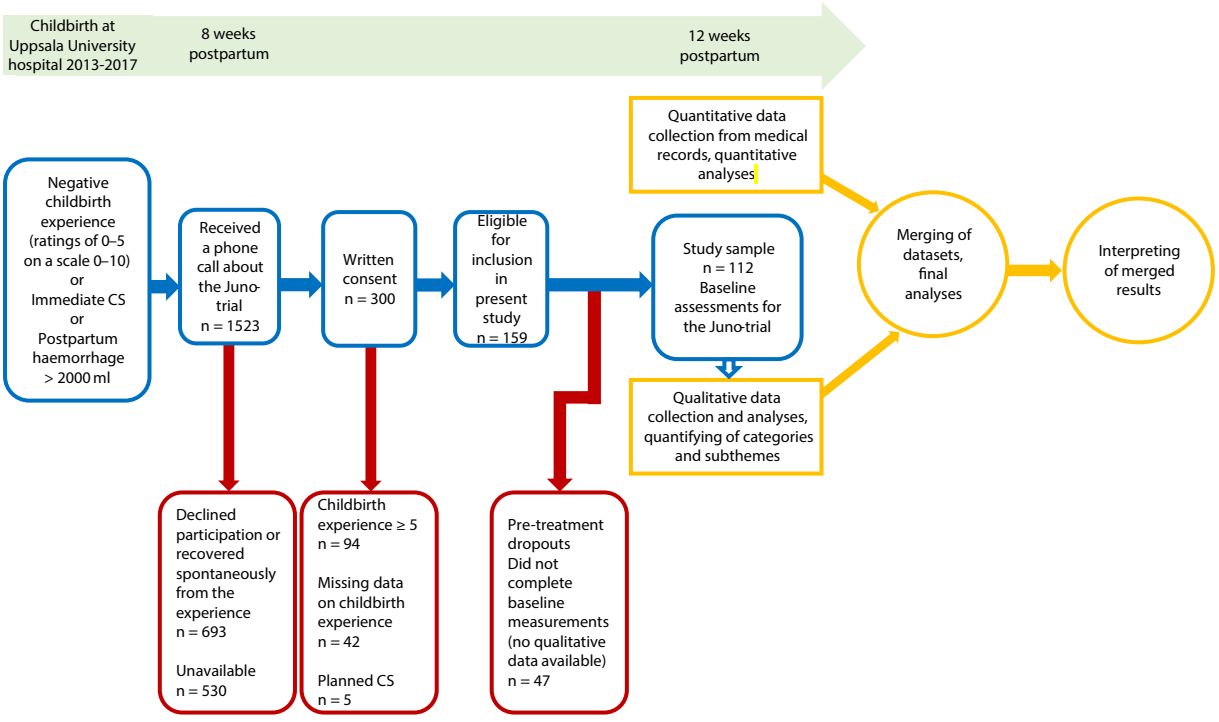

Fig. 1. Flowchart of participants and analysis process.

followed by an open-ended question, where participants were asked to, in their own words, describe any additional events they perceived as difficult, negative or traumatic during labour. In the second open-ended question, participants were asked to, in their own words, give examples of what they were unsatisfied with during their hospital stay, from which only statements related to labour and childbirth were included in the analyses. There was no word limit for the responses, which varied in length from a few sentences to several pages.

The written responses were analysed with the aim of exploring women's descriptions of childbirth as a negative experience, using qualitative content analysis according to the method described by Graneheim and Lundman [29]. First, answers were brought together into one text (unit of analysis) per woman. In the next step, meaning units were identified and condensed if necessary. Meaning units were thereafter labelled as manifest codes without interpretation, followed by re-contextualisation, when codes were abstracted and interpreted, before being clustered into subcategories including codes with internally similar and externally diverse manifest content. Subcategories with similarities were merged into categories with a higher degree of interpretation, and categories clustered into sub-themes with common underlying meaning. The coding was conducted separately by FV and AHE, followed by comparison and slight revision, before continued joint analysis and generation of categories and sub-themes together with SH. In the next step, FV, AHE, LL and AW discussed and revised the analysis until consensus was reached, and overarching themes were created. Lastly, the 17 statements from the question with fixed answers were used as codes and analysed with a deductive approach, resulting in a slight revision of one sub-theme, but not generating any new categories.

To enable the combination of qualitative and quantitative results in the mixed method analyses, data-transformation was conducted, that is, categories and sub-themes were quantified, by identifying them as present or absent for every participant.

Mixed method analysis

In the mixed method analysis, frequencies of qualitative categories and sub-themes were stratified on mode of birth and events during labour, i.e. ineffective epidural analgesia, foetal distress during labour, prolonged second stage of labour, and postpartum haemorrhage > 1000 ml. The mixed method analyses were solely descriptive, with neither qualitative categories and sub-themes nor events during labour being mutually exclusive. The weight of qualitative and quantitative data was considered even, and temporality concurrent, as illustrated in Fig. 1.

Results

Quantitative findings

Sample characteristics

Characteristics of the sample are shown in Table 1. The women had a mean age of 31 years at childbirth (SD 4.55), and the vast majority were Swedish born (n = 101, 91 %) and primiparas (n = 85, 76 %). Three in four women received epidural analgesia. Anal sphincter injury occurred in one fifth of vaginal births. Women who gave birth by unplanned CS rated the lowest mean overall childbirth experience (2.4, SD 1.3), while the highest (3.0, SD 1.1) was found among women with spontaneous vaginal births. EQ-5D VAS ranged from 27 to 96, with a mean value of 71 (SD 16.77). A third of the women reported depressive symptoms above cut-off for postpartum depression, and seven women (6 %) fulfilled the criteria for PTSD-FC according to TES (Table 1).

Mode of birth

Less than half of the 112 participants (44 %) gave birth spontaneously vaginally, and one fifth (21 %) by vacuum extraction. Almost one third (30 %) gave birth via unplanned CS, and seven women (6 %) by immediate CS (Table 2).

Events during labour

Almost one third of the women (29 %) experienced an epidural analgesia initially not being effective, which corresponds to 38 % of the total amount of epidural analgesias being performed in the sample (data not shown). Thirty women (27 %) went through sampling of scalp blood

Table 1
Characteristics of the sample.

Characteristics	n = 112
	Mean [SD] or n (%)
Age, years	31.06 [4.55]
Swedish born	101 (91.0)
University education	85 (75.9)
Primiparity	85 (75.9)
Multiparity	27 (24.1)
Previous caesarean section	7 (25.9*)
Gestational week at birth	39.97 [2.32]
Epidural analgesia	84 (75.0)
Blood loss, ml	660.36 [478.49]
Anal sphincter injury	15 (20.8**)
Apgar score less than 7 at 5 min	10 (8.9)
Overall childbirth experience at discharge from hospital***	2.71 [1.30]
Spontaneous vaginal	3.04 [1.12]
Vacuum extraction	2.48 [1.44]
Unplanned caesarean section	2.39 [1.34]
Immediate caesarean section	2.57 [1.61]
Self-rated health (EQ-5D VAS)	71.34 [16.77]
Postpartum depression (EPDS)****	37 (33)
Probable PTSD-FC (TES)	7 (6.3)

SD = standard deviation, VAS = visual analogue scale, EPDS = Edinburgh Postnatal Depression Scale, PTSD-FC = post-traumatic stress disorder following childbirth, TES = trauma event scale.
*of multiparous.
**of vaginal births.
***range 0–4.
****score ≥ 12.
NOTE: Missing on variables, n (%): Self-rated health: 12 (10.7), Postpartum depression: 12 (10.7), Probable PTSD-FC: 10 (8.9).

due to foetal distress, and 67 women (60 %) remained in the second stage of labour for 3 h or longer. Nineteen women (17 %) lost>1000 ml of blood at childbirth (Table 3).

Qualitative findings

Two overarching themes, representing different aspects of negative childbirth experience, emerged from the analysis. One of the themes, named *Within the body*, describes women's internal emotions and physical sensations, whereas the other theme, *From the outside*, includes women's perceptions of and experiences originating from, or caused by, external factors. The findings are illustrated in Fig. 2. Themes, sub-themes and their respective categories are further presented below.

Within the body

The theme ***Within the body,*** with sub-themes *Experiencing fear-based emotions* and *Experiencing physical distress,* describes internal experiences and bodily sensations. The theme represents how perceptions of childbirth affect the woman's feelings and body.

Experiencing fear-based emotions

This sub-theme includes different expressions of experiencing the fundamental emotion fear. Fear-based emotions can take different forms, and the categories included in the sub-theme can all be derived from fear. In the category *Fear and horror*, women described feelings of panic and anxiety, as well as being paralysed by fear.

> "In addition, the woman in the room next door, who gave birth after me, also didn't get help with the pain. Listening to her asking for help and hearing her anxiety, reflected my own screams. It took two hours before her baby arrived, I'm still having nightmares about hers and my screams combined".

There were also examples of *Death-related fear*, which formed one category. Included were both an actual fear of death, where women believed they were about to die, and women wishing for death during certain times during labour.

> "I wanted to die, it felt like a reasonable alternative. I could not take it anymore."

Fear of losing control is at the core of many anxiety disorders [30].

Table 2
Sub-themes derived from qualitative content analysis and by mode of birth.

Sub-theme		Mode of birth n (%)			
	All women n = 112	Spontaneous vaginal n = 49 (43.8)	Vacuum extraction n = 23 (20.5)	Unplanned CS n = 33 (29.5)	Immediate CS n = 7 (6.3)
Experiencing fear-based emotions	105 (93.8)	45 (91.8)	22 (95.7)	31 (93.9)	7 (100)
Experiencing physical distress	93 (83.0)	42 (85.7)	21 (91.3)	26 (78.8)	4 (57.1)
Being affected by care providers' and partner's behaviour	92 (82.1)	42 (85.7)	17 (73.9)	27 (81.8)	6 (85.7)
Being affected by bad facilities and poor organisation	34 (30.4)	12 (24.5)	5 (21.7)	14 (42.4)	3 (42.9)

CS = caesarean section.

Table 3
Sub-themes derived from qualitative content analysis and by events during labour.

Sub-theme	Events during labour n (%) n = 112							
	Ineffective epidural analgesia		Foetal distress		Prolonged second stage		Postpartum haemorrhage > 1000 ml	
	Yes n = 32 (28.6)	No n = 80 (71.4)	Yes n = 30 (26.8)	No n = 82 (73.2)	Yes n = 67 (59.8)	No n = 45 (40.2)	Yes n = 19 (17.0)	No n = 93 (83.0)
Experiencing fear-based emotions	29 (90.6)	76 (95.0)	29 (96.7)	76 (92.7)	63 (94.0)	42 (93.3)	18 (94.7)	87 (93.5)
Experiencing physical distress	30 (93.8)	63 (78.8)	24 (80.0)	69 (84.1)	57 (85.1)	36 (80.0)	13 (68.4)	80 (86.0)
Being affected by care providers' and partner's behaviour	22 (68.8)	70 (87.5)	24 (80.0)	68 (82.9)	57 (85.1)	35 (77.8)	17 (89.5)	75 (80.6)
Being affected by bad facilities and poor organisation	11 (34.4)	23 (28.7)	11 (36.7)	23 (28.0)	20 (29.9)	14 (31.1)	7 (36.8)	27 (29.0)

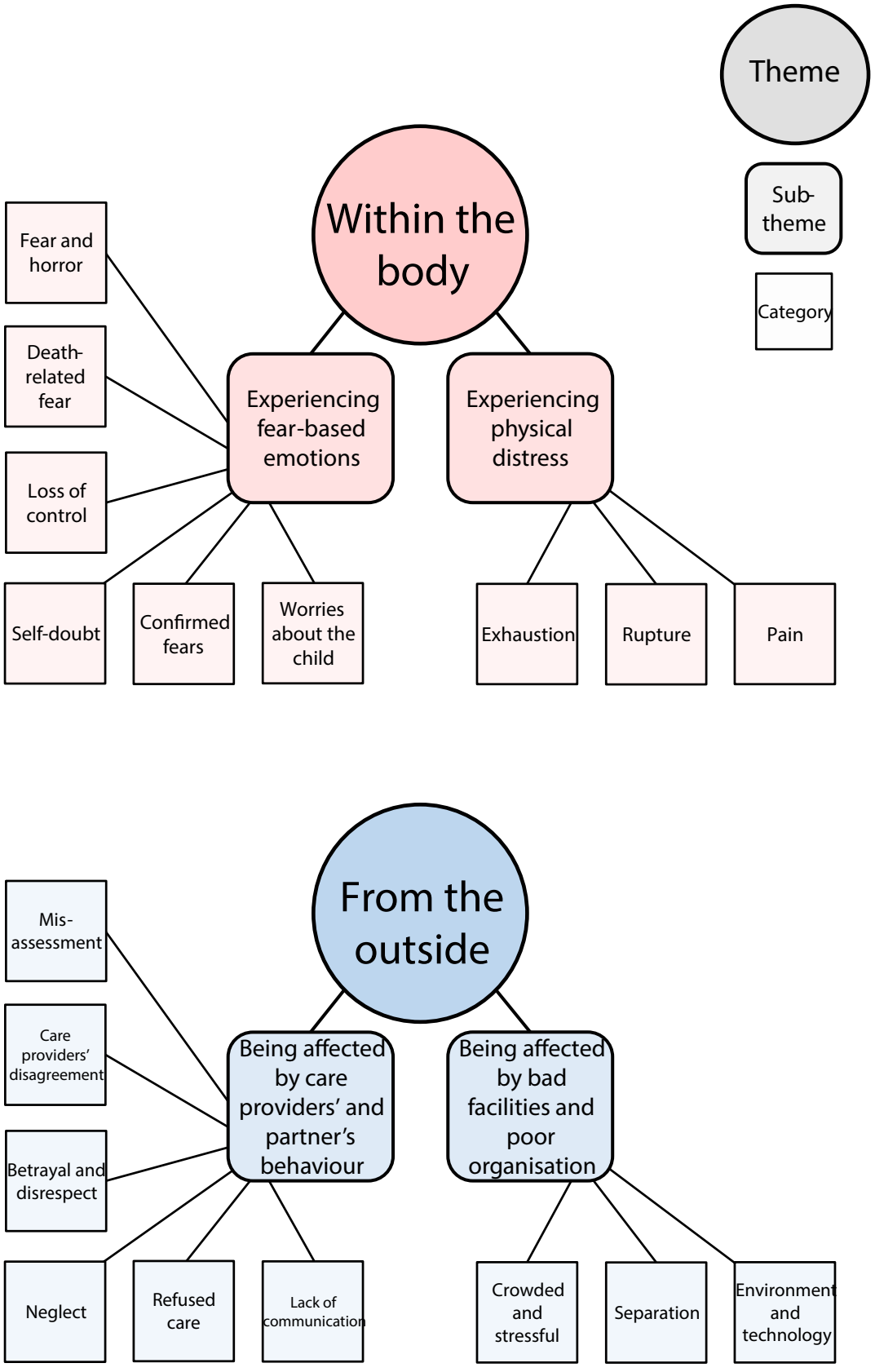

Fig. 2. Map of themes, sub-themes and categories derived from qualitative content analysis.

This was represented in the category *Loss of control,* in terms of losing track of time, or having memory gaps, as well as being completely taken aback by the intensity of labour. The women also described *Self-doubt*, i.e. uncertainty about their ability to succeed in labour, or that their bodies failed to cooperate during labour, resulting in anxiety related to self-blame and feelings of guilt. Some women had a fear of birth already during pregnancy, and described how the thing(s) they feared the most occurred during childbirth, i.e. severe perineal injury or unplanned CS. These experiences formed the category *Confirmed fears. Worries about the child* encompassed fear for the infant's well-being, related to indeterminate foetal heart pattern during labour, or to an infant in need of neonatal intensive care after birth. Some women did not know if the infant was alive or not.

> "I heard the staff talking about my child's health status and about blood samples that were to be taken from the child, but because I was so exhausted (and probably for several other reasons) I didn't understand what was being said in the room. I then thought that my child was in danger, even thought my child was not alive."

Experiencing physical distress

The other sub-theme related to internal sensations, *Experiencing physical distress,* concerns bodily expressions of negative childbirth experience. In the category *Exhaustion*, women described having experienced a severe lack of energy, for different reasons. Labour could have been taking long time, but the category also included vomiting, or having a fever. The category *Rupture* comprised occurrence of a perineal rupture itself, or negative experiences related to suturing.

> "After (delivery), my second-degree rupture had to be sutured at the operation theatre, which was very distressing, because the whole time I thought I would faint from exhaustion."

Descriptions of different aspects of *Pain* were common among the women. Some just mentioned "intense pain" in different wordings, others gave examples of painful examinations or procedures, i.e. the application of a balloon catheter for cervical ripening, or uterine massage after childbirth. They also wrote about painful contractions without periods of rest. The category *Pain* was also related to absent or non-satisfactory pain relief options, not seldom problems with epidural analgesia. The pain could be problematic also in early stages of labour:

> "I had no pauses between contractions when I was sent to the antenatal ward because I wasn't dilating, while the pain was so severe that I could not think. I was given painkillers, but they did not work, and the nurse just shrugged and said there was nothing more she could do."

From the outside

The theme ***From the outside,*** with sub-themes *Being affected by care providers' and partner's behaviour* and *Being affected by bad facilities and poor organisation* includes experiences originating from, or caused by, external factors. The theme indicates interaction with the surrounding environment, including the persons present.

Being affected by care providers' and partner's behaviour

The first sub-theme related to influence of external factors on the negative childbirth experience concerns encounters with the care providers and the partner. The category *Mis-assessment* included the perception of actions or decisions taken by doctors or midwives as being inaccurate. It could be management of augmentation of labour, or the timing of decisions about operative vaginal birth or CS. Some women hade clear opinions of how they wish their labour should have been handled.

> "If someone had told me to push earlier, the birth would not have taken such a long time."

The category *Care providers' disagreement* reflected women's experiences of midwives and doctors having different opinions of actions needed, particularly during the second stage of labour, which affected the women negatively. In some cases, women witnessed actual disagreements, but participants could also have perceived unspoken tensions between the midwife and obstetrician present. The category *Betrayal and disrespect* contained a wide range of encounters causing a lack of trust in the care providers. The women described how they felt pressure from the care providers to make certain choices about pain relief, or to perform in terms of pushing to avoid a birth by vacuum extraction or CS. Some women felt deceived by their midwife after having been given options that later were not available, or having birth plans that no one respected. A lack of support, especially from midwives, but also from partners, was experienced, resulting in not feeling safe. Belonging to this category were also examples of women feeling abused, due to procedures being performed without informed consent during labour. Moreover, participants experienced a poor attitude from some care providers, described as insensitiveness or nonchalance.

> "They kept saying that it was soon to be over. Then a doctor told me that now we are going to deliver your baby, and it needs to be delivered now, so relax and get it together and shut up! I, who was completely hysterical, panic-stricken, scared, a panicked animal in a cage. I laid in the bed and looked up at all seven (persons) standing over me. I felt that every-one was lying to me, every-one had a poker face except one of them, she looked worried."

The category *Neglect* included feeling ignored or invisible due to lack of participation, by not being involved in decisions made during labour. It could also be related to a lack of validation from unresponsive midwives or doctors, or care providers focusing on the technology in the birthing room instead of the woman, i. e. during periods of abnormal foetal heart pattern. The category *Refused care* comprised experiences of being denied care at the birth clinic in early labour, either in a telephone call or at a visit to the hospital. *Lack of communication* included not having received enough information during labour and birth, nor explanations of actions taken. Also experiences of the care providers not being informed about the women's health history, or birth plans, were contained in this category.

Being affected by bad facilities and poor organisation

The sub-theme reflecting negative experiences related to facilities and organisation of the care during labour and birth consisted of three categories. *Crowded and stressful* included a wide range of consequences of giving birth on a day perceived as busy. This could be delay of care or treatment, such as having to wait for first assessment by a midwife or for pain relief. It could also be delay of a birth assisted by vacuum extraction or CS. Women described a frequent exchange of midwives, or the midwife not being present as much as wished for, as well as worries about the midwives' wellbeing during busy shifts.

> "…that there is not enough staff at the labour ward. During a whole shift when they should have worked on helping my child descend, I was fully dilated, we were alone and I just lay in the bed in pain. The midwife came in, increased the oxytocin-drip, went out."

Separation after birth occurred when women were transferred to the recovery room without infant and partner after a surgical procedure such as CS, retained placenta, major haemorrhage, or suturing.

> "The most traumatic was being in the recovery room, where I was completely alone."

The category *Environment and technology* included negative experiences of equipment or appliances not working properly, or the birthing room not being well designed for its purpose.

Mixed method findings

As shown in Table 2, almost every woman (94 %) was represented in the sub-theme *Experiencing fear-based emotions.* The sub-themes *Experiencing physical distress* and *Being affected by care providers' and partner's behaviour* were also common, with more than 8 of 10 (83 %, 82 %) of the women having these experiences. One third (30 %) of the women had experiences related to *Being affected by bad facilities and poor organisation.*

In the stratification of sub-themes on mode of birth, *Experiencing physical distress* was most common among women who gave birth by vacuum extraction, while *Being affected by care providers' and partner's behaviour* was least common in that mode of birth.

Being affected by bad facilities and poor organisation was twice as common among women who gave birth by unplanned or immediate CS, compared to vaginal birth modes.

Table 3 shows the distribution of sub-themes by events during labour. Among women with ineffective epidural analgesia*, Experiencing physical distress* was more common, and *Being affected by care providers' and partner's behaviour* less common, compared to women who did not experience this event. Women with a postpartum haemorrhage of over 1000 ml did to a lesser extent *experience physical distress,* and were to a higher extent *affected by care providers' and partner's behaviour,* compared to women with normal blood loss at childbirth.

Only minor differences in the distribution of sub-themes were seen in the events Foetal distress and Prolonged second stage. The distribution of all categories in relation to mode of birth and events during labour is shown in Supplementary Table S2 and S3.

Discussion

In this study, 112 women's descriptions of childbirth as a negative experience were explored and analysed in relation to mode of birth and events during labour. The rate of events was high among the participants, which is not surprising, considering they all experienced childbirth as negative. Previous studies indicate that complications during labour and childbirth are the main risk factors for negative childbirth experience [2,12]. Also, the prevalence of anal sphincter injury among vaginal births in the study (20.8 %) was ten times higher than among vaginal births in Uppsala during the study period (2.8 %). Anal sphincter injury has in one previous study [42] been independently associated to negative childbirth experience, but the high prevalence in the present study could also be attributed to the majority of women being primiparas, and one third of the vaginal births being operative.

Qualitative analyses resulted in two overarching themes illustrating experiences within and outside the body described in four sub-themes, which differed greatly from each other. With a vast majority of the women being represented in three of four sub-themes, the results clearly show the multifaceted nature of childbirth experience, since each subtheme contained a wide range of experiences. Accordingly, only small differences were found in the mixed analyses when stratifying subthemes on birth mode and events during labour, indicating the challenges of forecasting who will have a persisting negative childbirth experience based on these factors.

When interpreting the results, it is important to note that participants were asked to describe in text events they found to be negative or traumatic during labour and birth, and hence chose themselves what to include, and no further probing for elaboration or depth was possible. That *Being affected by care providers' and partner's behaviour* was least common among women giving birth by vacuum extraction could be interpreted as if these women may have experienced a higher level of support, better communication, etc compared to other participants, but could likely be seen rather as an expression of the sub-themes *Experiencing fear-based emotions* and *Experiencing physical distress* being more prominent in this group. Women who gave birth by unplanned or immediate CS more often experienced *Being affected by bad facilities and poor organisation* than women with other modes of birth. This could be explained by the participating hospital's routine, at that time, of monitoring mothers and infants at different wards after surgery, despite known benefits for mother and infant of zero separation, i.e. keeping the mother-infant dyad intact after birth [31,32].

As expected, *Experiencing physical distress* was common among women whose epidural was ineffective (94 %). However, among women with a major blood loss, this sub-theme seemed to be less common than among women with normal blood loss (68 % vs 86 %). Since postpartum haemorrhage is a condition often associated with painful procedures such as uterine massage for haemostasis and pelvic examination, this is somewhat surprising. One possible explanation may be that experiences related to the sub-theme *Being affected by care providers' and partner's behaviour* overrode negative experiences of a physical nature. This is in line with previous findings, where experiences of inadequate communication during the time-critical event postpartum haemorrhage have been described [33]. Moreover, the sub-theme encompasses the category *Betrayal and disrespect*, with experiences of non-consented care and of feeling abused, which are examples of the globally increasingly recognised phenomenon of obstetric violence, recently shown to exist also in Sweden [34,35].

Almost every woman was represented in the sub-theme *Experiencing fear-based emotions.* Fear is an emotion elicited in response to perceived danger or threat, which places a person in a state where the ability to process input from occurrences in the surrounding environment is affected [36]. This could in itself influence communication, creating a downward spiral, where fear increases as a result of negative encounters with the care providers during labour. When being scared, the ability to understand information and instructions provided, as well as the ability to express ones wants and needs, can be impaired. This may compromise the midwife's ability to provide individually adapted support at the time, which in turn may increase fear. On the other hand, fear may also be a result of the midwife failing in their communication, resulting in increased anxiety, which may be exacerbated by unresponsiveness from the midwife, and thereby causing even more fear-based emotions. It is possible that when being very afraid, the sensitivity to pain may increase, and the risk of experiencing for instance loss of control also increases.

Previous research have found care provider actions and interactions, comparable to the sub-theme *Being affected by care providers' and partner's behaviour* in the theme *From the outside,* to be most important for traumatic birth experiences [37,38]. One way to interpret the present results is to see the theme *From the outside* as the "what", that can lead to the "how", presented in the theme *Within the body,* representing internal negative childbirth experiences, providing a new perspective on the multifaceted concept of negative childbirth experiences. The surrounding environment, including support persons and model of care, constitutes the "what" described in the categories belonging to the theme *From the outside*. These experiences may cause the emotions and physical sensations described in the categories belonging to the theme *Within the body,* that is the "how". As described above, the themes with their subthemes and respective categories appear to influence each other and have the potential to aggravate a negative childbirth experience. With fear-based emotions being so prominent in negative childbirth experiences, it is likely that all sub-themes can be considered interrelated parts of the experience, and the relationship between the midwife and the birthing woman impossible to separate from the rest. As Reed et al states, "it is vital that care providers understand how their practice influences the psychological and emotional experience of birth" (36, pp 7), but equally important is the possibility for birth attendants to provide sufficient support at all times, also during busy shifts at the labour ward. Midwives have reported self-criticism and feelings of insufficiency when they, because of a strained work situation, have failed to contribute in an optimal way to what they consider as a couple's most significant life event [39].

Awareness of the central role that fear may play in the experience of

childbirth can be of help when supporting birthing women, and for women and their partners in understanding negative childbirth experience and the processing of it. Thus, supporting and addressing fear during childbirth by providing comfort, reassurance and adequate medical information should be prioritized by health care professionals. Also, recovery from a negative childbirth experience could be facilitated by midwives validating the woman in her lived experience by normalising fear, without trying to correct the perception of the experience, but at the same time not refraining from "filling in the gaps" by providing Supplementary Information when needed.

Strengths and limitations

The main strength of this study is the recruitment process, in which a consecutive sample of Swedish-speaking women, aged 18 or older, who rated overall childbirth experience ≤ 4 at the study site during more than four years was included. This resulted in a somewhat different group compared to previous studies, that mainly recruited participants via targeted advertisement on social media forums or support groups, asking women to share experiences of childbirth perceived as negative or traumatic. The present study engaged women who were participating in an RCT evaluating an intervention for preventing mental unhealth postpartum, rather than women primarily interested in sharing their experiences, which may have increased the diversity in the sample, and thus contributed to the transferability of the results.

Notably, data analysed in the present study were obtained from the baseline assessment, prior to randomisation. The women's health status (Table 1) indicates they were still negatively affected by their childbirth experience when data were collected, three months postpartum, suggesting they were in need of support. It is important therefore to note, that the sample is thereby not representative of all women with negative childbirth experience shortly after giving birth, and certainly not of all birthing women in Sweden. Women in the study were older, more often primiparas, had a higher education level and were more often Swedish born, compared to the general population of birthing women. Predictors for non-participation in the Juno trial are reported in a separate publication, where also vaginal birth, having no experience of counselling for fear of childbirth, and absence of either preeclampsia, anal sphincter injury or intrapartum foetal distress were associated with non-participation [40]. Moreover, several pre-existing conditions of relevance for the perception of childbirth are unknown, which is a limitation of the present study. For instance, information on previous experiences of care is missing, which may influence women's attitudes towards her care providers, and also cause fear and anxiety. Despite these limitations, the findings in the present study provide a rich picture of the diversity in negative childbirth experiences.

Another strength is the composition of the research team conducting the qualitative content analysis, consisting of a midwife with experience from labour wards and from counselling of women with fear of birth, a physiotherapist specialised in obstetrics and gynaecology, together with a clinical psychologist and a psychotherapist with extensive experience of research on women's mental health. This enabled different perspectives on the research question, which contributed to confirmability in the qualitative findings. The use of questionnaires may also have improved confirmability, since the women completed them online, completely without influence from the researchers. Online surveys also have the advantage of being less susceptible to social desirability bias, compared to other tools [41]. However, the data collection did not allow for follow-up questions or elaborating on short answers, which is a limitation, although overall a rich textual material was obtained. Face-to-face interviews would have provided more developed answers, and the possibility to observe nonverbal actions and language, in addition to the possibility for further probing for elaboration or depth. To minimize the risk of fragmentation and thereby strengthening credibility of the results, effort was made not to make the meaning units too short in the content analysis, and quotations in the results section were carefully chosen. Dependability of results was obtained by not altering the questionnaires during data collection, which means that all women answered the questions in the same order and at the same time postpartum. During analyses of qualitative data, researchers were blinded from quantitative data.

Conclusion

Mixed-methods analyses demonstrate the challenges in understanding negative childbirth experience in relation to mode of birth and specific events during labour, with results clearly showing the multifaceted nature of this concept. The results contribute to the body of evidence of childbirth experience being purely subjective, impossible to predict from reading a woman's medical records. Regardless of mode of birth and events during labour, negative childbirth experience was dominated by fear-based emotions, which should be considered when designing support during and after labour, to prevent possible adverse effects of the childbirth experience.

Ethical Approval

The Regional Ethical Board in Uppsala approved the study, Dnr: 2012/495, 2013/03/20 and amendment 2016/11/16.

Funding

This work was supported by the Regional Research Council [Grant No RFR-368901, RFR-308451, RFR-480141] and by the Swedish Research Council funding for clinical research in medicine (ALF). The funders had no involvement in planning, data collection, data analysis or writing the paper. The corresponding author had full access to all the data in the study and is responsible for the decision to submit for publication.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ejogrb.2023.01.031.

References

[1] Simkin P. Just another day in a woman's life? Women's long-term perceptions of their first birth experience. Part I Birth 1991;18(4):203–10.
[2] Hosseini Tabaghdehi M, Kolahdozan S, Keramat A, Shahhossein Z, Moosazadeh M, Motaghi Z. Prevalence and factors affecting the negative childbirth experiences: a systematic review. J Matern Fetal Neonatal Med 2020;33(22):3849–56.
[3] Beck CT. Birth trauma: in the eye of the beholder. Nurs Res 2004;53(1):28–35.
[4] Andersen LB, Melvaer LB, Videbech P, Lamont RF, Joergensen JS. Risk factors for developing post-traumatic stress disorder following childbirth: a systematic review: L.B. Andersen *et al.* Acta Obstet Gynecol Scand 2012;91(11):1261–72.
[5] Beck CT, Watson S. Impact of birth trauma on breast-feeding: a tale of two pathways. Nurs Res 2008;57(4):228–36.
[6] Bell AF, Andersson E. The birth experience and women's postnatal depression: a systematic review. Midwifery 2016;39:112–23.
[7] Schytt E, Waldenström U. Risk factors for poor self-rated health in women at 2 months and 1 year after childbirth. J Womens Health (Larchmt) 2007;16(3):390–405.
[8] Dencker A, Nilsson C, Begley C, Jangsten E, Mollberg M, Patel H, et al. Causes and outcomes in studies of fear of childbirth: a systematic review. Women Birth 2019;32(2):99–111.
[9] Shorey S, Yang YY, Ang E. The impact of negative childbirth experience on future reproductive decisions: a quantitative systematic review. J Adv Nurs 2018;74(6):1236–44.
[10] Elmir R, Schmied V, Wilkes L, Jackson D. Women's perceptions and experiences of a traumatic birth: a meta-ethnography: Women's perceptions and experiences of a traumatic birth. J Adv Nurs 2010;66(10):2142–53.

[11] Hollander MH, van Hastenberg E, van Dillen J, van Pampus MG, de Miranda E, Stramrood C, et al. Preventing traumatic childbirth experiences: 2192 women's perceptions and views. Arch Womens Ment Health 2017;20(4):515–23.
[12] Viirman F, Hesselman S, Wikström AK, Skoog Svanberg A, Skalkidou A, Sundström Poromaa I, et al. Negative childbirth experience – what matters most? A register-based study of risk factors in three time periods during pregnancy. Sex Reprod Healthc 2022;100779.
[13] Attanasio L, Kozhimannil KB, Jou J, McPherson ME, Camann W. Women's experiences with neuraxial labor analgesia in the listening to mothers II survey: a content analysis of open-ended responses. Anesth Analg 2015;121(4):974.
[14] Angle P, Landy CK, Charles C, Yee J, Watson J, Kung R, et al. Phase 1 development of an index to measure the quality of neuraxial labour analgesia: exploring the perspectives of childbearing women. Can J Anesth/J Can Anesth 2010;57(5):468–78.
[15] Pergialiotis V, Bellos I, Antsaklis A, Papapanagiotou A, Loutradis D, Daskalakis G. Maternal and neonatal outcomes following a prolonged second stage of labor: a meta-analysis of observational studies. Eur J Obstet Gynecol Reproduct Biol 2020;1(252):62–9.
[16] Gaudernack LC, Michelsen TM, Egeland T, Voldner N, Lukasse M. Does prolonged labor affect the birth experience and subsequent wish for cesarean section among first-time mothers? A quantitative and qualitative analysis of a survey from Norway. BMC Pregnancy Childbirth 2020;20(1):605.
[17] Creswell JW, Plano Clark VL. Designing and conducting mixed methods research. Third Edition. Los Angeles: SAGE; 2018. p. 492.
[18] Chabbert M, Panagiotou D, Wendland J. Predictive factors of women's subjective perception of childbirth experience: a systematic review of the literature. J Reprod Infant Psychol 2021;39(1):43–66.
[19] Sjömark J, Parling T, Jonsson M, Larsson M, Skoog SA. A longitudinal, multi-centre, superiority, randomized controlled trial of internet-based cognitive behavioural therapy (iCBT) versus treatment-as-usual (TAU) for negative experiences and posttraumatic stress following childbirth: the JUNO study protocol. BMC Pregnancy Childbirth 2018;18(1):387.
[20] Adler K, Rahkonen L, Kruit H. Maternal childbirth experience in induced and spontaneous labour measured in a visual analog scale and the factors influencing it; a two-year cohort study. BMC Pregn Childbirth 2020;20(1):415.
[21] Sorenson DS, Tschetter L. Prevalence of negative birth perception, disaffirmation, perinatal trauma symptoms, and depression among postpartum women. Perspect Psychiatr Care 2010;46(1):14–25.
[22] ACOG practice bulletin Operative Vaginal Delivery. International Journal of Gynecology & Obstetrics. 2001 Jul;74(1):69–76.
[23] Rabin R, de Charro F. EQ-SD: a measure of health status from the EuroQol Group. Ann Med 2001;33(5):337–43.
[24] Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: development of the 10-item edinburgh postnatal depression scale. Br J Psychiatry 1987;150(6):782–6.
[25] Wickberg B, Hwang CP. The edinburgh postnatal depression scale: validation on a swedish community sample. Acta Psychiatr Scand 1996;94(3):181–4.
[26] American Psychiatric Association, American Psychiatric Association, editors. Diagnostic and statistical manual of mental disorders: DSM-IV-TR. 4th ed., text revision. Washington, DC: American Psychiatric Association; 2000. 943 p.
[27] Wijma K, Söderquist J, Wijma B. Posttraumatic stress disorder after childbirth: a cross sectional study. J Anxiety Disord 1997;11(6):587–97.
[28] Harris R, Ayers S. What makes labour and birth traumatic? A survey of intrapartum 'hotspots'. Psychol Health 2012;27(10):1166–77.
[29] Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004;24(2):105–12.
[30] Radomsky AS. The fear of losing control. J Behav Ther Exp Psychiatry 2022;77:101768.
[31] Bystrova K, Ivanova V, Edhborg M, Matthiesen AS, Ransjö-Arvidson AB, Mukhamedrakhimov R, et al. Early contact versus separation: effects on mother-infant interaction one year later. Birth 2009;36(2):97–109.
[32] Klemming S, Lilliesköld S, Westrup B. Mother-newborn couplet care from theory to practice to ensure zero separation for all newborns. Acta Paediatr 2021;110(11):2951–7.
[33] Briley AL, Silverio SA, Singh C, Sandall J, Bewley S. "It's like a bus, going downhill, without a driver": A qualitative study of how postpartum haemorrhage is experienced by women, their birth partners, and healthcare professionals. Women Birth 2021;34(6):e599–607.
[34] Annborn A, Finnbogadóttir HR. Obstetric violence a qualitative interview study. Midwifery 2022;105:103212.
[35] O'Brien E, Rich M. Obstetric violence in historical perspective. Lancet 2022;399(10342):2183–5.
[36] Ekman P, Davidson RJ, editors. The nature of emotion: fundamental questions. New York: Oxford University Press; 1994. 496 p.. Series in affective science.
[37] Reed R, Sharman R, Inglis C. Women's descriptions of childbirth trauma relating to care provider actions and interactions. BMC Pregnancy Childbirth 2017;17(1):21.
[38] Rodríguez-Almagro J, Hernández-Martínez A, Rodríguez-Almagro D, Quirós-García JM, Martínez-Galiano JM, Gómez-Salgado J. Women's perceptions of living a traumatic childbirth experience and factors related to a birth experience. Int J Environ Res Public Health 2019;16(9):E1654.
[39] Hansson M, Lundgren I, Dencker A, Taft C, Hensing G. Work situation and professional role for midwives at a labour ward pre and post implementation of a midwifery model of care - A mixed method study. Int J Qual Stud Health Well-being 2020;15(1):1848025.
[40] Sjömark J, Svanberg A, Viirman F, Larsson M, Poromaa I, Skalkidou A, et al. Antepartum and labour-related single predictors of non-participation, dropout and lost to follow up in a randomised controlled trial comparing internet-based cognitive-behaviour therapy with treatment as usual for women with negative birth experiences and/or post-traumatic stress following childbirth. BMJ Open 2022;12(11):e063214.
[41] Gnambs T, Kaspar K. Socially desirable responding in web-based questionnaires: a meta-analytic review of the candor hypothesis. Assessment 2017;24(6):746–62.
[42] Johansson C, Finnbogadóttir H. First-Time Mothers' Satisfaction with Their Birth Experience – a Cross-Sectional Study. Midwifery 2019;79:102540.