



What influences women's experiences of childbirth in Flanders? – A quantitative cross-sectional analysis of the Babies Born Better survey

Ellen Thaela^{a,*}, Hanne Meermans^b, Katrien Beeckman^{b,c}

^a Faculty of Health & Wellbeing, School of Community Health & Midwifery, University of Central Lancashire, Fylde Rd, Preston, England PR1 2HE, UK

^b Verpleeg- en Vroedkunde, Centre for Research and Innovation in Care, Midwifery Research Education and Policymaking (MIDREP), Universiteit Antwerpen, Prinsstraat 13, Antwerp 2000, Belgium

^c Faculty of Medicine and Pharmacy, Public Health, Nursing and Midwifery Research Unit, Vrije Universiteit Brussel (VUB), Universitair Ziekenhuis Brussel (UZ Brussel), Laarbeeklaan 101, Brussels 1090, Belgium

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ABSTRACT

Objective: Labour and birth experiences are of great importance since these can have positive, but also negative effects on women's health and wellbeing. This is the first study, which investigated the factors that influence women's experiences of childbirth in Flanders, Belgium.

Design: A cross-sectional quantitative analysis was used to examine primary data obtained by the Babies Born Better project. Data collection took place via an online survey from April 2018 until August 2018 in Flanders.

Participants: 1414 women that gave birth across all birth settings between 2013 and 2018, who speak Flemish/Dutch were included. Participants were self-selected by filling out the Babies Born Better survey in 2018.

Findings: The majority of the Flemish women included in this study reported a positive labour and birth experience. Analysis of the demographic variables showed that women who were single or not co-habiting reported a worse experience of labour and birth ($P = 0.012$). All obstetric factors included showed significant differences ($P < 0.01$). Lastly, women were more likely to report a better experience when birth took place at home or in a midwifery unit and when the main care provider was a midwife ($P < 0.01$). When controlled for significant variables from the univariate analysis, an impact on the birth experience was only found with the obstetric factors. A preterm (OR 0.544, 95%CI 0.362–0.817) and post term birth (OR 0.664, 95% CI 0.462–0.953) were found to reduce the chance of a good experience compared to a birth at term. In case of complications during pregnancy, women were less likely to report having had a good experience (OR 0.632, 95% CI 0.470 – 0.849). Medical interventions such as induction- (OR 0.346, 95% CI 0.241 – 0.497) and augmentation of labour (OR 0.318, 95% CI 0.218–0.463), an instrumental birth (OR 0.318, 95% CI 0.218–0.463) or a planned- (OR 0.349, 95% CI 0.205–0.596) or emergency caesarean section (OR 0.190, 95% CI 0.109–0.329) reduced the chances of women reporting to have had a good experience with care around labour and birth.

Key conclusions: The majority of women included in this study reported a good experience of care during labour and at birth. Certain obstetric factors such as having a straightforward pregnancy without complications, a physiological onset of labour at term without the need for augmentation and to give birth vaginally (without instrument) have shown a positive impact on women's reported birth experiences.

Implications for practice: Women's involvement in decision-making, especially when medical interventions are wanted or needed can improve positive birth experiences. More research is needed on how to support women and empower them, even more so in case of complications to ensure a sense of control and achievement.

Introduction

How childbearing women experience labour and birth is of great importance and can have various positive and negative effects on their

emotional, mental, and physical health (Hildingsson et al., 2013; Kuipers et al., 2023; Schaal et al., 2019). Furthermore, it can have an influence on the woman's capacity to mother and look after her newborn (Hildingsson et al., 2013). As her new role as a mother commences, her

* Corresponding author.

E-mail address: ethaels@uclan.ac.uk (E. Thaela).

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sense of self and role in society changes (Reed, 2021). The emotions felt, the interactions with care providers and their actions are remembered for decades (Reed et al., 2017).

According to research, childbirth is perceived as positive for between one- and two-thirds of women (Coo et al., 2021; Hildingsson et al., 2013). Leinweber et al. (2022) defines a positive childbirth experience as: *“a woman’s experience of interactions and events directly related to childbirth that made her feel supported, in control, safe, and respected; a positive childbirth can make women feel joy, confident, and/or accomplished and may have short and/or long-term positive impacts on a woman’s psychosocial well-being”* (Leinweber et al., 2022). A good experience is known to have a positive influence on the mother-child bonding and breastfeeding (Schaal et al., 2019). Other benefits for the mother are an increase in self-worth, confidence and sense of achievement which all can facilitate psychological growth (Hildingsson et al., 2013).

Up to 30% of women report having experienced childbirth as negative or even traumatic (Rijnders et al., 2008; Smarandache et al., 2016; Soet et al., 2003). A bad experience can have a long term negative influence on the relationship with the baby and others, impair the way a woman is able to care for her newborn, negatively influence her physical and mental health (Reed et al., 2017), and it might influence the decision to have another child (Schaal et al., 2019).

The World Health Organisation (WHO, 2018) has published a definition for a positive childbirth experience in their guideline for intrapartum care that is based on the findings of the systematic qualitative review of Downe et al. (2018) (Downe et al., 2018; WHO, 2018). The findings of this review emphasised that, to achieve respectful care that is humanised and safe, care needs to be responsive to women’s needs, beliefs and values. Most women highly value giving birth physiologically using their inherent physical and psychological strength with as minimal as possible interventions but take into account that birth might not always go as ‘planned’ (Downe et al., 2018; Fenwick et al., 2005; Proctor, 1998). Women wish to actively participate in their care by being informed, making decisions, maintaining a sense of accomplishment, including at times where intervention is advised or necessary (Downe et al., 2018; Martin and Fleming, 2011). Other aspects of care that are found to be important is having access to healthcare providers that are compassionate and kind for both emotional and practical assistance, continuity of a birth partner and an environment in which they feel safe (clinically, psychologically, and culturally), giving birth to a healthy baby, and achieving long-term health for the whole family (Downe et al., 2018; Proctor, 1998). Furthermore, the World Health Organisation (WHO) highlights the importance of woman-centred care and a positive, safe, and transformational experience for all (WHO, 2018).

Internationally, much research has been done around what specific factors influence the experience of labour and childbirth for women and their families. Demographic, obstetric, and organisational elements of care are three of them. Demographic factors known to influence the experience of care are: age (Falk et al., 2019; Mattison et al., 2018; Smarandache et al., 2016) and civil status (Henriksen et al., 2017; Mattison et al., 2018; Waldenström et al., 2004). According to Gürbüz et al. (2019) the place of residence has no influence on the experience (Gürbüz et al., 2019).

Obstetric factors on the other hand include gestational age (Alfaro Blazquez et al., 2019; Tooten et al., 2013) and parity (Falk et al., 2019; Mattison et al., 2018; Smarandache et al., 2016; Waldenström et al., 2004). When problems in pregnancy emerge or women have an induction or augmentation of labour, this can have an impact on their experience (Falk et al., 2019; Kempe and Vikström-Bolin, 2020). Furthermore, how women give birth to their babies, also has an influence on the experience of care (Falk et al., 2019; Kempe and Vikström-Bolin, 2020; Smarandache et al., 2016).

Lastly, the organisation of care can also have an impact on the birth experience. For instance, research has shown that satisfaction of care might vary depending on the professional group that was the main care

provider during labour and birth (Mattison et al., 2018; McLachlan et al., 2016).

All these previously mentioned factors of influence have been examined internationally. In Flanders, research around this subject has been scarce and so it is unknown what influences Flemish women’s childbirth experiences. With this study, the aim was to fill this gap by focusing on the analysis of the factors that influence the experience of labour and childbirth for women who have given birth in Flanders.

In the context of Flanders and Brussels, 70 maternity services exist. 1.67% of women give birth with a midwife and 98.33% with the obstetrician as the main care provider (Vandeputte et al., 2023). In 2018, 43.6% of women that gave birth were first time mums, 56.4% gave birth to a subsequent baby. About one in four women had their labour induced and 69.7% used epidural analgesia. Most women (68.6%) had a spontaneous vaginal birth, 9.3% gave birth with the help of an instrument (9.1% ventouse and 0.3% forceps), 21.8% had a caesarean section, and 0.2% gave birth vaginally to a baby in the breech position (Devlieger et al., 2019).

This research project was conducted as part of a Masters of Sciences (MSc) in Nursing and Midwifery at the University of Antwerp (academic year 2019–2020) and builds on the ‘Babies Born Better’ project. The Babies Born Better survey is set up to explore women’s view and experiences around labour and birth. The analysis of the data of the Babies Born Better project has provided an insight into the factors that have the potential to both positively and negatively influence women’s experiences (UCLan, 2017; van den Berg et al., 2022; Vedeler et al., 2021).

Methods

Data collection

A cross-sectional quantitative analysis was used to examine primary data obtained by the Babies Born Better project. Data collection took place via an online survey from April 2018 until August 2018 in Flanders, Belgium. Participants included were women that gave birth within five years of completing the survey, between 2013 and 2018, and speak Flemish/Dutch.

Ethics

Ethics approval was received on the 1st of April 2016, by the University of Central Lancashire Ethics Committee. Personal data is randomized, stored digital and handled according the UK Data Protection Act (2018) and University of Central Lancashire guidelines. Collected data remains secure and access is only given to designated country co-ordinators. Informed consent from participants was gained at the beginning of the survey, containing information on privacy, anonymity, and confidentiality. No further ethical clearance was necessary.

The questionnaire

The Babies Born Better trans-European, anonymous, mixed methods online survey was used as the method for data collection. The survey was available on <https://www.babiesbornbetter.org/> and was widely disseminated through social media (mainly Facebook) (UCLan, 2017; Vedeler et al., 2021; Weckend, 2015).

Babies Born Better was initiated in 2014 as a result of the COST Action IS0907: ‘Changing childbirth cultures and consequences’ networking project. The project focused on creating an important source of knowledge on how care around childbirth could be improved for mothers, babies and their families. The study was further developed as part of a second COST ACTION IS1405: “Building Intrapartum Research Through Health – an interdisciplinary whole system approach to understanding and contextualising physiological labour and birth” (Skoko et al., 2018; Weckend, 2015).

The open online survey (SurveyMonkey®) consisted of twenty-two

questions containing both open- and closed-ended questions. The first three sections focused on: demographics (age, residence, standard of living, civil status, degree/education, and work status) and maternal characteristics (number of children, parity, gestational age, pregnancy complications, place of birth, interventions during childbirth, mode of birth, and which professional group was most involved). In section four, open-ended questions were asked about how they experienced pregnancy, labour and childbirth (what worked well, what could be improved, and reasons they would/would not recommend the birth-place to a close friend or family member). The survey was translated in twenty-two different languages (Kuipers et al., 2023; Skoko et al., 2018; UCLan, 2017; Vedeler et al., 2021; Weckend, 2015).

Statistical analysis

Our outcome variable: 'experience of labour and birth' is ordinal (5 point Likert scale) and recoded as: 'bad experience' (mostly quite a bad experience and mostly a very bad experience), 'neutral' (some of it was good, some of it was bad) and 'good experience' (mostly quite a good experience and mostly a very good experience).

Descriptive statistics were presented in frequencies and percentages. Age was recoded into categories (<30 years, 30–39 years, ≥40 years). Gestation was recoded as preterm (<38 weeks), term (38–40 weeks), and postterm (>40 weeks). The number of children was classified as: one child, two children, and three or more children. Furthermore, civil status was categorized as married or in a relationship; cohabiting; and single, or not cohabiting with a partner. Lastly, birth setting was recoded into university hospital or general hospital with university character; general hospital; or homebirth and birth in a midwifery unit. A general hospital with university character is a hospital that is affiliated with a university and so has a number of university owned beds.

A Chi-square test was used for the univariate analysis, examining the relation between the influencing factors and the experience of labour and birth. Logistic regression analysis was adopted for multivariate statistics. In logistic regression analysis, the outcome variable was dichotomized into a worse experience (bad experience or neutral) or a good experience to analyse the influence of the different factors on having 'a good experience'. First, univariate analysis was performed. Next, all significant variables found were incorporated in multivariate model using the enter method. The enter method, which is the most widely used technique for multiple linear regression, was applied to find out which independent variable has the biggest effect on the dependant variable.

Results were described using Odds Ratios (OR), 95% confidence intervals (95% CI) and a significance level of $P < 0.05$.

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS®) version 26.

Results

In total, 1790 women participated in this survey and 1715 were included in the analysis. In 74 cases, there were missing results (incomplete survey). Additionally, for one participant it was unclear whether she had given birth within the past five years of filling out the survey, so a decision was made to exclude the data. In total, 1414 women filled out the question about labour and birth experience and therefore, only the data of these participants was subject to further analysis.

Baseline characteristics

Most of the participants were between 30 and 40 years old (68.1%) and gave birth at term (66.1%). The majority had one (46.7%) or two (41.0%) children, and were married or in a relationship, cohabiting (95.5%). Women mostly lived in Belgium (99.2%) and in the majority of cases, birth took place in a hospital. 58.9% gave birth in a general

hospital and 37.5% in a university or general hospital with a university character. 3.6% of participants gave birth at home or in a midwifery unit (see Table 1).

Labour and birth experience

The majority of women reported a good experience of care around labour and birth (66.8%). 19.6% was neutral, 13.6% reported a bad experience.

Factors related to experiences in labour and birth

Bivariate analysis (Table 1)

Amongst the demographic variables, a significant difference was found in women's experiences depending on their marital status ($P = 0.012$). Women who are married or cohabiting in a relationship (66.9%) were found to be more likely to have a good experience compared to women who are single or not living together (61.9%).

All obstetric factors showed significant differences ($P < 0.01$) in the experience. Women more often had a good experience when: they gave birth at term (71.6%), they previously gave birth to two (73.6%), three or more children (74.0%), they had no pregnancy complications (71.9%), they were not induced (72.6%), labour was not augmented (70.7%) or when they had a vaginal birth (76.3%).

In factors related to the organisation of care, some significant differences were found ($P < 0.01$). Women were more likely to have a good experience when the main care provider was a midwife (81.0%) compared to a doctor/obstetrician (53.6%) or combination (63.7%), and when birth took place at home or in a midwifery unit (93.5%) compared to in a hospital (63.9% and 64.1%, depending on university character).

Multivariate analysis (Table 2)

When controlled for significant variables from the univariate analysis, only obstetric factors seem to impact the birth experience. We found that in case of a term birth, the chance of a good experience was higher compared to a preterm (OR 0.544, 95%CI 0.362–0.817) and post term birth (OR 0.664, 95% CI 0.462–0.953).

Women who had complications during pregnancy were less likely to have a good experience (OR 0.632, 95%CI 0.470 – 0.849) compared to the ones who had a straightforward pregnancy. When women had an induction, they were less likely to have a good experience (OR 0.346, 95% CI 0.241 – 0.497) compared to women who were not induced. Women also had less chance of a good experience when labour was augmented (OR 0.318, 95% CI 0.218–0.463) compared to women who did not have this intervention. The chances of a good experience decreased when an instrument such as a ventouse or forceps was used at birth (OR 0.276, 95% CI 0.177–0.432) and when women received a planned (OR 0.349, 95% CI 0.205–0.596) or emergency caesarean section (OR 0.190, 95% CI 0.109–0.329) compared to having a vaginal birth.

Discussion

Main findings

The analysis has given an overview of the influencing factors on the experience of labour and birth from a Flemish women's point of view, using the Babies Born Better Survey.

The findings of the multivariate analysis of this study illustrate that, demographic factors do not influence women's experience of childbirth. This does not reflect earlier research, in which an older maternal age was found to significantly negatively influence reported birth experience (Falk et al., 2019; Smarandache et al., 2016). Some of the findings of the bivariate analysis do reflect earlier research about marital status and place of residence. Women who have a partner are more likely to report a good birth experience compared to women who are single (Mattison

Table 1Demographic, obstetric and organization of care in relation to labour and birth experience ($n = 1412$).

Experience of labour and birth Chi-square test		Bad experience n (%)	Neutral n (%)	Good experience n (%)	Total n (%)	Missing n (%)	Significance P
Demographic factors							
Age category	> 40	10 (12.3)	11 (13.6)	60 (74.1)	81 (5.8)		
	30 – 40	124 (13.0)	181 (19.0)	648 (68.0)	953 (68.1)		
	<30	55 (15.1)	86 (23.6)	224 (61.4)	365 (26.1)	316 (18.4)	0.097
Civil status	Married or in a relationship, cohabiting	174 (12.9)	271 (20.2)	899 (66.9)	1344 (95.5)	308 (18.0)	0.012
Place of residence	Single, or not cohabiting with a partner	16 (25.4)	8 (12.7)	39 (61.9)	63 (4.5)		
	Belgium (Flanders)	191 (13.6)	275 (19.6)	935 (66.8)	1401 (99.2)	303 (17.7)	0.216
	Other (China, Mozambique, The Netherlands, Norway, Bahrain, Trinidad and Tobago)	0 (0.0)	4 (36.4)	7 (63.6)	11 (0.8)		
Obstetric factors							
Gestation	Preterm	34 (18.4)	46 (24.9)	105 (56.8)	185 (13.5)	345 (20.1)	<0.01
	At term	96 (10.6)	161 (17.8)	649 (71.6)	906 (66.1)		
	Postterm	51 (18.3)	61 (21.9)	167 (59.9)	279 (20.4)		
Number of children	1	117 (17.7)	155 (23.5)	388 (58.8)	660 (46.7)	303 (17.7)	<0.01
	2	54 (9.3)	99 (17.1)	426 (73.6)	579 (41.0)		
	3 or more	20 (11.6)	25 (14.5)	128 (74.0)	173 (12.3)		
Complications during pregnancy	No	90 (10.3)	155 (17.8)	628 (71.9)	873 (62.4)		
	Yes	98 (18.6)	120 (22.8)	309 (58.6)	527 (37.6)	315 (8.4)	<0.01
Induction	No	92 (9.9)	163 (17.5)	676 (72.6)	931 (76.8)		
	Yes	58 (20.6)	84 (29.8)	140 (49.6)	282 (23.2)	502 (29.3)	<0.01
Augmentation of labour	No	105 (10.7)	18 (18.6)	693 (70.7)	980 (80.8)		
	Yes	45 (19.3)	65 (27.9)	123 (52.8)	223 (19.2)	502 (29.3)	<0.01
Mode of birth	Spontaneous vaginal birth	68 (6.9)	165 (16.8)	751 (76.3)	984 (69.9)	307 (17.9)	<0.01
	Ventouse or forceps	44 (33.8)	33 (25.4)	53 (40.8)	130 (9.2)		
	Planned caesarean section	21 (18.1)	27 (23.3)	68 (58.6)	116 (8.2)		
	Emergency caesarean section	36 (37.9)	30 (31.6)	29 (30.5)	95 (6.7)		
	Other (Homebirth, episiotomy, fundal pressure, waterbirth, etc.)	22 (26.5)	22 (26.5)	39 (47.0)	83 (5.9)		
Care organizational factors							
Main care provider	Midwife	25 (5.7)	58 (13.3)	353 (81.0)	436 (30.9)	305 (17.8)	<0.01
	Doctor/obstetrician	89 (20.8)	109 (25.5)	229 (53.6)	427 (30.3)		
	Combination	70 (14.6)	104 (21.7)	305 (63.7)	479 (34.0)		
	Other (myself, ambulance, mobile emergency group, a different combination)	7 (10.3)	7 (10.3)	54 (79.4)	68 (4.8)		
Birth setting	Homebirth or Midwifery Unit	0 (0.0)	3 (6.5)	43 (93.5)	46 (3.6)		
	University hospital or general hospital with a university character	70 (14.7)	102 (21.4)	304 (63.9)	476 (37.5)	446 (26.0)	<0.01
	General hospital	111 (14.9)	157 (21.0)	479 (64.1)	747 (58.9)		

et al., 2018; Waldenström et al., 2004). In the study of Vedeler et al. (2023), 18.2% of women that were single reported a negative birth experience compared to 11.3% in the married or cohabiting group. The acknowledgement that social inequalities have a negative influence on women's experiences is crucial (Vedeler et al., 2023). Even though no significant difference was found in the multivariate analysis around this topic due to weak evidence, it is critical to offer equitable care, including emotional and/or social support tailored to the needs of each individual (Leinweber et al., 2022; Vedeler et al., 2023).

Similarly to the demographic factors, the findings of the multivariate analysis of the factors related to the organisation of care, did not show a major impact on women's birth experience. Though, the bivariate analysis showed a significantly positive influence on birth experience when the chosen place of birth was at home or in a midwifery unit and where care was mostly led by a midwife. The influence on birth experience by the chosen place of birth and models of care have extensively been investigated by researchers in different parts of the developed world. Overall, women in the developed world, choosing to give birth in

Table 2

Factors influencing the likelihood of a good experience during labour and birth in Flanders ($n = 1061$).

Likelihood of a good experience during labour and birth Logistic regression ENTER method		Unadjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Significance of the model: $P < 0.01$			
Demographic factors			
Age category	> 40	1	
	30 – 40	0.74 (0.44–1.25)	
	<30	0.56 (0.32–0.95)	
Civil status	Married or in a relationship, cohabiting	1	
	Single, or not cohabiting with a partner	0.80 (0.48–1.35)	
Place of residence	Belgium (Flanders)	1	
	Other (China, Mozambique, The Netherlands, Norway, Bahrain, Trinidad and Tobago)	0.87 (0.25–2.99)	
Obstetric factors			
Gestation	Preterm	0.52 (0.37–0.72)	0.54 (0.36–0.82)
	At term	1	1
	Postterm	0.59 (0.45–0.78)	0.66 (0.46–0.95)
Number of children	1	0.51 (0.40–0.65)	
	2	1	
	3 or more	1.02 (0.69–1.50)	
Complications during pregnancy	No	1	1
	Yes	0.55 (0.44–0.69)	0.63 (0.47–0.84)
Induction	No	1	1
	Yes	0.37 (0.28–0.49)	0.35 (0.24–0.49)
Augmentation of labour	No	1	1
	Yes	0.46 (0.34–0.62)	0.32 (0.22–0.46)
Mode of birth	Spontaneous vaginal birth	1	1
	Ventouse or forceps	0.21 (0.15–0.31)	0.27 (0.18–0.43)
	Planned caesarean section	0.44 (0.29–0.65)	0.35 (0.21–0.59)
	Emergency caesarean section	0.14 (0.09–0.22)	0.19 (0.11–0.33)
	Other (homebirth, episiotomy, fundus pressure, waterbirth, etc.)	0.28 (0.17–0.43)	0.25 (0.14–0.43)
Care organizational factors			
Main care provider	Midwife	1	
	Doctor/obstetrician	0.27 (0.20–0.37)	
	Combination	0.421 (0.30–0.56)	
	Other (myself, ambulance, mobile emergency group, different combination)	0.91 (0.48–1.71)	
Birth setting	Homebirth or Midwifery Unit	1	1
	University hospital or general hospital with a university character	0.12 (0.04–0.40)	0.44 (0.13–1.52)
	General hospital	0.13 (0.038–0.41)	0.42 (0.13–1.43)

a midwife-led service (at home or in a birth-centre), report a higher satisfaction with care during labour and at birth (Christiaens and Bracke, 2009; Janssen et al., 2006; Overgaard et al., 2012). More in depth research is needed in Flanders about place of birth and preferred model of care to be able to generalise these results. As mentioned before, most women in Belgium receive obstetric-led care. In 2020, the study centre for perinatal epidemiology in Flanders registered that only 0.7% of births took place outside of hospital (at home or in a midwifery unit) (Devlieger et al., 2021).

Finally, we found that various obstetric factors do have a major impact on the birth experience. We learned that the more physiological labour and birth progresses, the greater the chances that the woman perceives her care as a good experience. This is in line with other papers, emphasizing that most women prefer a normalised, humanised (Martin and Fleming, 2011; Sandall et al., 2010), and physiological labour and birth, with minimum interventions where possible, while using their own inherent physical and psychological strength (Downe et al., 2018; ten Hoope-Bender et al., 2014). Women want to be involved in decision-making, especially when medical interventions are wanted or needed (Downe et al., 2018). More research is needed on how to support women and empower them, especially in case of complications to ensure a sense of control and achievement.

Experience of labour and birth

In an ideal world, care around labour and birth is designed on what women find desirable (Renfrew et al., 2014). Though, when asking women about their birth satisfaction, it needs to be taken into account that women can only consider the experience they had themselves. This view is often limited as women might have limited choice of maternity care in their local area or they might be unaware of existing and/or better alternatives. This means that, even though quality of care is poor, women still might be satisfied with their experience (Downe et al., 2018; van Teijlingen et al., 2003). Nonetheless, there is a great importance to identify both interventions and outcomes, but also to include women's experiences when assessing the quality of maternity care (WHO, 2018). Because, aside from which services are accessible, if maternity services are to be improved, knowledge about what matters to women needs to be available (Downe et al., 2018).

In Flanders, 66.8% of women reported a good experience of labour and birth. This is in contrast with what is found in previous studies conducted in the Netherlands and Canada. In the study of Rijnders et al. (2008) and Smarandache et al. (2016), 80% to 83% of women reported a (very) positive childbirth experience (Rijnders et al., 2008; Smarandache et al., 2016). More research is needed to uncover why a lower percentage of Flemish women rate their experience positively. A qualitative analysis of the open questions of the survey could be used to give an insight in what women want to see improved.

Women reported a better experience when pregnancy was straightforward, without complications and where a physiological labour and birth without unnecessary interventions had taken place. Miller et al. (2016) found that morbidity, mortality, and so harm for mothers and babies is caused in both cases where routine overmedicalisation (doing too much or using non-evidence-based and unnecessary interventions) as well as not providing enough care (care is unavailable or too late, there is no adequate resources or care is below evidence-based standards) is provided. Part of the solution to this problem proposed is having a named midwife for all pregnant women (Miller et al., 2016). A gap in the evidence exists around how many women in Flanders have a straightforward physiological birth without unnecessary interventions. It is also unknown how many women have access to a named midwife. To be able to draw conclusions from the Flemish context, reliable audit needs to be set-up and more research is needed.

Strengths and limitations

This study had a higher response rate ($n = 1790$) compared to most similar studies based on the Babies Born Better Survey performed in different countries such as Italy ($n = 1000$) (Skoko et al., 2018), Croatia ($n = 341$) (Raboteg-Šarić et al., 2017), Austria ($n = 713$) (Luegmair et al., 2018), and Portugal ($n = 1348$) (Santos and Neves, 2021). To the contrary, 11,135 women who had given birth in Norway where they have approximately 58,000 births per year responded to the survey (Vedeler et al., 2021). This rate is six times the amount compared to the response rate in Flanders, but the overall yearly birth rate is similar (Devlieger et al., 2021).

The aim of the Babies Born Better survey was to uncover women's positive experiences. A side effect is that also negative experiences can surface. Both the information of the positive, as well as negative experiences were used to inform this study. The recruitment strategy of the survey was not aimed at getting a representative sample at population level but to get an insight in the contrasting birth experiences amongst women (van den Berg et al., 2022; Vedeler et al., 2023). Recall-bias, response bias and self-selection bias are well known methodological limitations in studies using an online survey as a tool for data-collection (Kalimeri et al., 2019).

The characteristics of the study sample were not compared to those of the eligible population due to limited availability of population data (demographic characteristics e.g. migration, socio-economic inequities and education). There might be an over- or underrepresentation of specific and marginalised groups. Often responses to online surveys are skewed towards women with high socio-economic status and higher education. Subsequently, there is no certainty that the study sample was representative of the population. In total, only 1414 participants were included who had birthed their babies in the past 5 years in Flanders, where annually approximately 61,700 births take place (2020) (Devlieger et al., 2021).

In hospitals in Flanders, it is more difficult to make assumptions about which healthcare provider has played the biggest role in the care received. The midwife is present during labour, the obstetrician will usually only be present in the second stage of labour or at birth. Obstetric-led care is the most prevalent model of care. Women who had a midwife as their main care provider were over-represented in this sample (30.9%) as in reality, 1.67% of women have a midwife as their main care provider (Benahmed et al., 2020; Devlieger et al., 2021; Vandeputte et al., 2023). Women having a caesarean section were under-represented in this sample (14.9%) compared to the percentage in Flanders actually giving birth via caesarean section (21.8%) (Devlieger et al., 2021).

Conclusion

To the best of our knowledge, this is the first study conducted in Flanders on what influences women's birth experience. The majority of women included in this study reported a good experience of care during labour and at birth. Certain obstetric factors such as having a straightforward pregnancy without complications, a physiological onset of labour at term without the need for augmentation and to give birth vaginally using their own inherent strength (without the need for an instrument or caesarean section) have shown a positive impact on women's reported birth experiences.

Care around labour and birth should be organised around what women want and need. Therefore, discussing individual birth preferences, organising debrief sessions, and continually asking women about their experiences is crucial for all maternity services in Flanders to provide high quality maternity care.

Ethical approval

Ethical approval was received on the 1st of April 2016, by the

University of Central Lancashire Ethics Committee.

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CRediT authorship contribution statement

Ellen Thaelts: Supervision, Writing – original draft, Writing – review & editing. **Hanne Meermans:** Formal analysis, Methodology, Writing – original draft. **Katrien Beeckman:** Supervision, Formal analysis, Methodology, Writing – original draft, Writing – review & editing.

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.

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