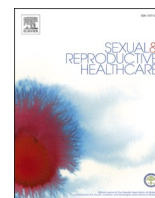




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Women's experiences with being pregnant and becoming a new mother during the COVID-19 pandemic

Joeri Vermeulen^{a,b,*}, Johan Bilsen^c, Ronald Buyl^b, Delphine De Smedt^d, Leonardo Gucciardo^e, Gilles Faron^e, Maaïke Fobelets^{a,b}

^a Department Health Care, Brussels Centre for Healthcare Innovation, Erasmus Brussels University of Applied Sciences and Arts, Brussels, Belgium

^b Faculty of Medicine and Pharmacy, Department of Public Health, Biostatistics and Medical Informatics Research group, Vrije Universiteit Brussel (VUB), Brussels, Belgium

^c Faculty of Medicine and Pharmacy, Department of Public Health, Mental Health and Wellbeing Research Group, Vrije Universiteit Brussel (VUB), Brussels, Belgium

^d Department of Public Health and Primary Care, Ghent University, Ghent, Belgium

^e Department of Obstetrics and Prenatal Medicine, Universitair Ziekenhuis Brussel, Vrije Universiteit Brussel (VUB), Brussels, Belgium

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ABSTRACT

Objective: During the COVID-19 pandemic a national quarantine was imposed in Belgium, which led to changes in the maternity care provision. Despite emerging literature, it remains unclear how pregnant women and women who have recently given birth experienced this period. With this study we aim to explore these women's experiences during the COVID-19 pandemic.

Methods: This qualitative study is a part of a large longitudinal study on women's health-related quality of life (HRQoL), during the COVID-19 pandemic. An open-ended question, in an online survey, asking women about their experiences during the perinatal period was analysed using a thematic analysis.

Results: Of the 1007 women who participated in the HRQoL-study in June 2020, 556 (55%) women answered the open question. In general, we identified a multiplicity of mixed and interconnected feelings. Many women reported negative feelings; nevertheless, the pandemic also had some positive aspects for respondents. Six overarching themes were identified: fear of contamination, feeling isolated and unsupported, not able to share experiences, disrupted care, feeling unprepared and experience a peaceful period.

Conclusion: Although perinatal healthcare professionals did their utmost to provide the necessary care, being pregnant or being a new mother during this pandemic was challenging at times. However, this period was also experienced as a peaceful period with lot of opportunities to rest. Some of the changes such as telework and restricted visiting policies were experienced positively by many. Lessons learned can support perinatal healthcare professionals and policy makers in the organisation of maternity care in the post-pandemic era.

Introduction

At the end of 2019, an emerging number of people infected by the SARS-CoV-2 virus was reported, which causes the life threatening coronavirus disease COVID-19 [1]. In the beginning of the year 2020, this virus rapidly spread globally and the World Health Organization declared COVID-19 to be a global health emergency on January 30th 2020 [2] and a pandemic on March 11th 2020 [3].

As in other countries, Belgium issued several emergency measures to limit the spread of the virus. The Belgian government imposed a national quarantine from March 13th 2020 onwards, allowing the movement of

people only for work and health reasons [4]. Additionally a lock down plan was launched by closing schools, restaurants, cafés and stopping all kind of gatherings [5]. From March 18th 2020, confinement and social distancing measures were tightened, telework was mandatory, non-essential services were closed, travel was restricted, and ultimately borders were closed on April 19th 2020. A phase-out plan started on May 4th 2020, gatherings up to four people were allowed, at the same time people were obliged to wear masks in public transport [5]. The last stage of the phase-out plan started on June 8th 2020, restaurants, cafés and the borders within the Europe reopened, and cultural and sporting events were allowed under strict conditions [6].

* Corresponding author at: Erasmus Brussels University of Applied Sciences and Arts, Laarbeeklaan 121, 1090 Brussels, Belgium.

E-mail address: joeri.vermeulen@ehb.be (J. Vermeulen).

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The distancing measures, including the termination of non-essential services and school closures resulted in unprecedented disruptions of normal routines, social connections, education and employment [7]. In many countries antenatal care services were limited to mandatory visits, affecting pregnant women's fears about the course of their pregnancy and their own and their baby's health [8]. It has been documented that the COVID-19 pandemic poses a huge challenge for pregnant women's mental health [9]. Strict public health measures directed towards mitigating the spread of disease are known to have negative psychological effects leading to stress, anger and confusion [10]. Pregnant women reported higher stress during the pandemic which can have implications for maternal and child health [11]. American pregnant women experienced moderate to high levels emotional distress, attributable to feeling unprepared for birth due to the pandemic and fears for a COVID-19 infection [12].

Isolation, social distancing and extreme changes in daily life may elevate the risk of depression among pregnant women [13]. Several studies reported that depression, insomnia and anxiety levels amongst pregnant women were significantly higher than in non-COVID-19 times [7,13,14,15]. More specifically, pregnant women expressed fears about the health of their babies, themselves and their families during the pandemic [8]. It is known that potential protective factors for anxiety and depression among pregnant women include increased social support [15]. A survey in primary care in Belgium revealed that women's social support was negatively affected by the lockdown [4]. Likewise, Irish pregnant women reported lower perceived social support during the pandemic [11]. The lack of social support during the pandemic increased women's anxiety [8].

In the first wave of the pandemic (March-May 2020), United Kingdom, Italy, Spain, France, Belgium and Netherlands were all amongst the top ten COVID-19 affected countries in the world [16]. The disruptions caused by the pandemic for maternal and new-born health in Belgium were numerous [17]. Perinatal health care was affected and consultation offices of governmental perinatal organizations had to be closed for several weeks [4]. During the first wave of the pandemic in Belgium, midwives could only personally visit patients at home when absolutely necessary and needed to justify those visits to health authorities [17]. While seven antenatal visits were mandatory during the lock-down in Belgium (KCE), changes in consultation strategies were quickly adopted and there was a major switch towards telephone consults [18]. To our knowledge, data about antenatal visit postponement during Covid-19 in Belgium are not available.

In most countries maternity care was under pressure since the outbreak [19] as perinatal care changed radically and fast. Moreover, basic elements of the midwife-woman relationship such as meeting in person and providing a comforting touch have been upended in an attempt to maintain distance and reduce cross-infection [20]. While antenatal visits moved to telehealth, women were uncertain if they would be able to have their partner to attend the birth [21]. Giving birth alone may be an anxious and stressful prospect for women [22]. Conflicting recommendations led hospitals to create a variety of maternity care policies with varying levels of restrictions on birthing women [21]. Moreover, the majority of women in a US study [21] reported inadequate birth support during childbirth. In Belgium especially women in the early postpartum and without previous breastfeeding experience reported a higher burden in terms of reduced medical counselling [4].

Although findings from international literature confirm that the emergency measures to control the pandemic and the related changes in maternity care clearly affected pregnant women's mental health, little is known about how Belgian pregnant women and new mothers experienced the COVID-19 pandemic. With this study, we aim to understand the experiences of these women, hoping to contribute in this way to an adequate care by perinatal healthcare professionals and an efficient organisation of maternity care in the post-pandemic era.

Methods

Design and data-collection

The data-collection for this study was done as a part of a larger study aiming to assess the health-related quality of life (HRQoL) of pregnant women and women who have recently given birth (until 3 months postnatal at the first survey) during the COVID-19 pandemic. Between April 22th and May 5th 2020, women were invited to participate in this study during antenatal and postnatal outpatient visits to the Universitair Ziekenhuis Brussel or to a midwifery primary care practice not affiliated to a hospital. Women were additionally informed via a national press release inviting pregnant and new mothers, up to three months postnatal, to participate. The press release was shared by the co-authors on social media such as LinkedIn and Facebook. Women were invited with an information letter, which contained a link to the online survey. The survey was developed in Qualtrics® and available in three languages: Dutch, French and English. At the end of the first survey, women could indicate whether they wanted to receive invitations for follow-up questionnaires on their HRQoL whenever the containment measures would change. A second survey was then sent to those women on May 15th 2020, and a third one on June 15th 2020.

In this third survey, an additional open ended, non-obligatory, question asked women to share their experiences with being pregnant and becoming a new mother during the COVID-19 pandemic: 'How did you experienced being pregnant and becoming a new mother during the COVID-19 pandemic? What were positive and challenging aspects for you? We are interested in your story, you can write down your experiences about one or more topics: e.g. social contacts, family and/or relationships, follow-up by perinatal health professionals, mental health and your perinatal period experiences'. The results of this open-ended questions are discussed in this article.

Data-analysis

The study took a generic qualitative approach, which includes a rich description of the phenomenon under investigation and is not guided by an explicit or established set of philosophic assumptions, for data-analysis. We followed the thematic data-analysis strategy as described by Braun and Clarke (2006) [23]: (1) familiarizing with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes and (6) producing the report. Two researchers (MF, female and JV, male and both experienced in qualitative research) analysed the data independently in NVivo version 12 (QSR International). There was considerable variation in women's experiences of the perinatal period during the pandemic, offering rich data. Despite the variation in data, data saturation was obtained as no new themes emerged from the data analysis. Data saturation was confirmed and the themes derived from this analysis were initially discussed between both researchers, in a second phase with an expert in qualitative research (JB, male and expert in qualitative research). In a following phase the analysis was shared for feedback with the entire multidisciplinary research team of co-authors including health scientists (JB, DD, RB), obstetricians (LG, GF) and midwives (MF, JV). This enabled us to refine our analysis and to improve the credibility of our results. Consolidated criteria for reporting qualitative studies (COREQ) [24] were applied during data-collection, analysis and reporting the results.

Ethical considerations

Ethical approval for this study was obtained in April 2020 from the Universitair Ziekenhuis Brussel and the Vrije Universiteit Brussel (VUB) (B.U.N. 143/202/000/0062). An informed consent was asked prior to the start of the survey. All data is stored at a secured server of Vrije Universiteit Brussel (VUB).

Results

Of the 1007 women who participated in the third survey, 556 women (55%) answered the open question reporting their experiences being pregnant and becoming a new mother during the COVID-19 pandemic. Most women were between 26 and 35 years old (81%), with a university

Table 1
Sociodemographic characteristics of respondents by perinatal phase*.

| | Total sample (n = 556) | 2nd Pregnancy trimester (n = 81) | 3th Pregnancy trimester (n = 243) | Postpartum (n = 232) |
|--|---------------------------|----------------------------------|--------------------------------------|-------------------------|
| | n (%) | n (%) | n (%) | n (%) |
| Age | | | | |
| 18–25 years | 16 (3) | 1 (1) | 9 (4) | 6 (3) |
| 26–35 years | 449 (81) | 68 (84) | 200 (82) | 181 (78) |
| ≥ 36 years | 91 (16) | 12 (15) | 34 (14) | 45 (19) |
| Educational level | | | | |
| Secondary education or lower | 76 (14) | 10 (12) | 34 (14) | 32 (14) |
| University college | 205 (37) | 31 (38) | 92 (38) | 82 (35) |
| University | 275 (50) | 40 (49) | 117 (48) | 118 (51) |
| Employment status | | | | |
| No income | 17 (3) | 4 (5) | 8 (3) | 5 (2) |
| Welfare/replacement income | 136 (24) | 17 (21) | 60 (25) | 59 (25) |
| Self-employment | 37 (7) | 5 (6) | 13 (5) | 19 (8) |
| Wage employment | 365 (66) | 55 (68) | 161 (66) | 149 (64) |
| Unknown | 1 (0) | 0 (0) | 1 (0) | 0 (0) |
| Relationship status | | | | |
| Married | 286 (51) | 37 (46) | 133 (55) | 116 (50) |
| Co-habiting | 255 (46) | 41 (51) | 104 (43) | 110 (47) |
| Single | 9 (2) | 1 (1) | 3 (1) | 5 (2) |
| Unknown | 6 (1) | 2 (2) | 3 (1) | 1 (0) |
| Region | | | | |
| Brussels-capital region | 104 (19) | 14 (17) | 54 (22) | 36 (16) |
| Flanders region | 249 (45) | 25 (31) | 90 (37) | 134 (58) |
| Wallonia region | 203 (37) | 42 (52) | 99 (41) | 62 (27) |
| Language | | | | |
| English | 21 (4) | 1 (1) | 8 (3) | 12 (5) |
| French | 316 (57) | 57 (70) | 162 (67) | 97 (42) |
| Dutch | 219 (39) | 23 (28) | 73 (30) | 123 (53) |
| Parity | | | | |
| Zero | 164 (30) | 37 (46) | 127 (52) | 0 (0) |
| One | 229 (41) | 38 (47) | 83 (34) | 108 (47) |
| Two or more | 103 (29) | 6 (7) | 33 (14) | 124 (53) |
| COVID-19 infection status | | | | |
| Symptomatic or recovered (tested positive) | 7 (1) | 0 (0) | 1 (0) | 6 (3) |
| Symptomatic (not tested) | 11 (2) | 4 (5) | 5 (2) | 2 (1) |
| Recovered (not tested) | 55 (10) | 14 (17) | 25 (10) | 16 (7) |
| Asymptomatic (not tested or tested negative) | 483 (87) | 63 (78) | 212 (87) | 208 (90) |

* No women were in the first pregnancy trimester at the moment of data collection.

diploma (50%), in wage employment (66%), married (51%), living in the Flanders region (45%) and French speaking (57%) see Table 1.

Overall, the COVID pandemic was experienced as a challenging period with lots of mixed and opposed feelings. Based on the thematic analysis, women’s experiences were clustered into 6 themes: (1) fear for contamination, (2) feeling isolated and unsupported, (3) not able to share the experience, (4) disrupted care, (5) feeling unprepared and (6) experience a peaceful period.

Fear of contamination

Respondents feared contracting the virus and the consequences this might have on their pregnancy and baby. Especially fear of miscarriage and preterm birth were reported.

“Fear of catching the coronavirus and losing my baby at the time of the lockdown when the disease was unknown. Lot of stress that gradually passed”.(respondent 108).

Women wanted to protect their (unborn) baby. The outside world was perceived as dangerous, women were anxious to go outside their home. Some respondents reported being anxious to consult their perinatal health professional or to go the hospital for follow up as they feared contamination and experienced the hospital environment scary.

“I was afraid to visit the hospital for check-ups, even at the general practitioner’s office I was not at ease”.(respondent 56).

Likewise, work, public transport and shopping were reported as scary and were avoided whenever possible. Some respondents feared that their partner would bring the virus into their family, this was more expressed by women whose partner still worked outdoors.

“I was quite stressed because my husband is an emergency nurse and given the conditions in which they worked, I was very worried for him, but also for my pregnancy and my first child”. (respondent 62).

Many were anxious about the future, as it is uncertain how a contamination might affect their pregnancy and the period around childbirth. Women felt uncertain about giving birth and many were worried about how things are going in the hospital during a pandemic. Conversely, some respondents were anxious for the progressive easing of measures, the anticipated second wave and the evolution of the pandemic. Deconfinement was experienced as a step-by-step return to the outside world, but with an increased risk of contamination and danger.

Feeling isolated and unsupported

During the pandemic social contacts were considerably limited, some pregnant women felt trapped, isolated and lonely. Participants expressed the need for social contacts and many were craving to meet their friends. Missing out on external activities was experienced as a huge drawback.

Respondents also worried about the possible absence of their partner during labour and childbirth.

“I would like to give birth together with my husband and that my son and parents can come and visit us. But, I am afraid this is not going to work. That that is causing me some stress”. (respondent 324).

After childbirth, parents felt isolated with their new born in their cocoon. This cocoon was mostly experienced as warm and comforting, but some experienced it as lonely and boring too. Social interactions changed, digital technologies were experienced as helpful and a worthwhile alternative. but, respondents felt digital communication could not replace social contacts or respond to their feelings of loneliness. Women missed face-to-face interactions with family and friends and it was difficult to share their magic moments from a distance.

As maternity visits at home were forbidden, women's professional and social support network felt away and the family was on their own. Many found it difficult that they could not rely on household help. Having to deal with all domestic chores in combination with early parenthood was challenging. Feelings of tiredness were reported by many, this was mostly the case when women had to work from home with other children at home due to school closures. Consequently, families were under pressure. Respondents were out of their rhythm, certainly after childbirth.

"... my three-year-old toddler ... had to stay at home and receive the necessary attention. I did not get much time to rest. The first weeks (after childbirth) were very tiring: heavy nights, cramps, reflux, ... I could not enjoy my new baby. I could have used so much help from my parents, friends, ... but unfortunately we were not allowed to see anyone... I feel most guilty towards my baby because it is exactly those first weeks that I was unable to enjoy". (Respondent 159).

The only person most participants could rely on was their partner, this was easier when the partner could work from home, was unemployed or had flexible workhours. Most respondents appreciated the involvement of their partner in the household such as shopping, assisting with childcare and domestic chores. When the partner was not able to support sufficiently or for single moms, women felt on their own, isolated and unsupported.

Not able to share the experience

Due to the isolation and limited contacts respondents could not share their unique moments of pregnancy and parenthood with their loved ones. In some cases, the pregnancy was announced by phone or video chat. As one could not meet their families and friends, the pregnancy of several respondents remained hidden and abstract to the outside world. Feelings of being on their own were more prominent in absence of the partner, mostly because the partner could not work from home. Some felt sad not being able to share the evolution of their pregnancy, the movements of their baby and to show their growing bellies. Some respondents experienced their pregnancy as 'not normal', 'hidden', 'stolen' or expressed feelings of 'having lost a part of pregnancy'.

"No feeling of being pregnant as no one except close family shares this pregnancy ... My first pregnancy, I had to stay in bed from week 26 on and I felt like my pregnancy had been stolen from me... it's a similar feeling to the isolation of COVID". (respondent 88).

Nearly all participants found it difficult to accept that their partner could not be present at antenatal consultations, certainly during ultrasounds. They felt sad that their partner was excluded from these unique moments and that they could not share those moments together. Some respondents worried that this exclusion might hinder the partner's involvement with the pregnancy and bonding with their child.

"As the partner is not allowed to join me during (antenatal) consultations, the relationship between the baby and the partner is different. I live the pregnancy all by myself". (respondent 407).

Given the uncertainties of the evolution of the pandemic and related changing policies in hospitals, women were afraid to give birth alone.

"My husband was very afraid that as the rules for giving birth became even stricter, he might not be able to attend the birth if I tested positive at time of admission. Because he could not go with me in quarantine as we would not have childcare for our toddler daughter with both grandparents unable to do so". (respondent 524).

While most respondents understood that maternity visits in hospitals were forbidden, most felt particular sad that they could not share this moments with their older children. When postpartum visits of the partner were limited or forbidden, women felt lonely in hospital, which

was hard to bear in some cases. This was also the case for single moms.

"I chose to become a conscious single mum, but without any visitors there the term "single mum" seems to be very literally". (respondent 358).

Because of the limited restricted hospital visits, some decided for an early discharge from hospital.

"I found it very painful and mentally hard not to be allowed visitors. In hospital, I felt very bad that my daughter was not allowed to visit me. That is why I went home sooner than planned". (respondent 300).

Parents felt sad that they were not able to share these moments with their beloved ones, also after being discharged from the hospital. Not sharing their happiness with family and friends was difficult. Alternatively, parents showed their baby at the window, via webcam or pictures, while gifts were dropped at the front door. Some parents were only able to show their baby to the grandparents two or three months after birth. The inability to share this unique experience with their family, was extra difficult for women with families abroad because the borders were closed.

"No family were able to come from the UK to help us, ... and they have still not been able to meet our new baby even though she is nine weeks old now. This has caused a big strain on my relationship with my parents and has definitely contributed to my postnatal depression". (respondent 142).

Disrupted care

For most women, the provision of maternity care changed abruptly during the pandemic, e.g. appointments were cancelled, switches between perinatal health professionals, consultations via phone or webcam. In the first phase of the pandemic, care was limited to essential medical care only and women experienced the provision of maternity care as disrupted. Due to disrupted care, women worried about the evolution of their pregnancy and in particular the health of their baby. Some reported difficulties in accessing maternity care while non-essential medical care was cancelled.

"... how difficult it was to make a first appointment at the hospital. The people at the administration kept saying they were not allowed to accept new patients, not even pregnant women, and this to make an ultrasound of the baby to know if everything was all right". (respondent 363).

Next to the essential consultation visits, all non-essential care was cancelled such as information and physiotherapist sessions. Many respondents found this difficult to understand. The experienced disrupted care, by different unknown perinatal health professionals, with less continuity of care made it for some difficult to establish trust in the health professionals. Some felt lost and neglected, which was stressful, this was more prominent in primigravida.

"This is my first pregnancy and I feel neglected and abandoned. I am now 32 weeks pregnant and have only seen my gynaecologist once at the beginning of my pregnancy and have had no medical control so far". (respondent 391).

Nonetheless, respondents appreciated the efforts of their perinatal health professionals. They felt reassured when care was accessible, safe and available and health professionals took their time for them. Some perinatal health professionals succeeded to reassure the woman even in case when face-to-face encounters were replaced by digital alternatives.

"From the lockdown onwards, the midwife preferred to perform consultations by telephone as much as possible. Despite this, she was still able to help me a lot ... I am very satisfied that I contacted her". (respondent 67).

Feeling unprepared

Many respondents felt unprepared for childbirth and parenthood. Visits to the labour and maternity ward and information sessions were cancelled. Additionally, due to the cancellation of non-essential care such as physiotherapy, osteopathy, aqua gym some felt not supported and unprepared. Many women searched the internet for information, while not obvious to find, this information was perceived as helpful though, but not equally as face-to-face encounters with the perinatal health professionals. Some multipara reported that they were rather happy with the current situation. As they could rely on previous experiences they felt better prepared. Conversely, primipara reported feeling unsupported and lost, contributing to their uncertainty.

“As all information sessions as well as the sessions with the physiotherapist to prepare me for childbirth were suspended, I felt abandoned”. (respondent 167).

Peaceful period

In contrast with the predominantly negative experiences related to the pandemic, many respondents reported this period also as a peaceful and quiet period with lot of opportunities to rest. This period allowed them to take breaks during the day and live on their own rhythm, some reported a slowdown of their life which was welcome. Also mental rest was reported, as respondents had less social contacts they did not had to deal with tiresome interferences of others with their pregnancy. Consequently, the pregnancy was experienced as a private and intimate experience between the couple.

“Much more peaceful, no interference from others. Therefore, a very easy, relaxed pregnancy. Corona had a good influence on the pregnancy”. (respondent 25).

The main reason that the pregnancy was a peaceful period, is due to changes in respondents' professional life. Telework was welcomed by most and was experienced as efficient due to less transportation and more flexible working hours, providing opportunities to rest or to adapt to their personal needs in daytime.

“Very positively, because being a teleworker, I was able to take little naps when I was tired. I felt less stress than during my first pregnancy and the first trimester went very well!”. (respondent 37).

Some described telework as the only positive thing of the pandemic. Tough, some women experienced blurs between to work and life domain, the search for a new balance was challenging them. Telework was for some tiring too, this was mainly reported when the other children were home because childcare and schools were closed and one could not rely on help. When the partner was not able to support either, telework was experienced as exhausting.

Some respondents lost their jobs and experienced their unemployment as good timing. Because of the increased free time, there were more opportunities to prepare, setting up and decorating the house.

“I was temporarily unemployed. This period of confinement was almost a blessing for me, I was able to rest and concentrate on myself and my pregnancy”. (respondent 215).

Nevertheless this period was challenging for some because of the financial implications of their unemployment.

That maternity visits at the hospital were limited to only the partner was a relief for many respondents. Many felt relax, enjoyed their rest, with few stimuli nor disturbing interferences. It was reported that this had a positive influence on both parents and new-born, being more relax. People could take their time to start off as a family, which was enjoyable. Limited visits were mainly beneficial for the breastfeeding which could be done in a relax atmosphere with no interruptions by

visitors.

“I experienced the restricted visits as an advantage. The maternity time could go entirely to taking care for the baby, partner and self-care. No worries about subtly trying to make it clear that you would rather not have visitors”. (respondent 440).

Discussion

In this study, we captured the experiences of pregnant women and women who have recently given birth during the COVID-19 pandemic. We identified a multiplicity of mixed and interconnected feelings. Data analysis identified the following themes: (1) fear of contamination, (2) feeling isolated and unsupported, (3) not able to share the experience, (4) disrupted care, (5) feeling unprepared and (6) experience a peaceful period, as determining women's perinatal experiences during the pandemic.

Our respondents feared COVID-19 contamination and the consequences this might have on their pregnancy and baby. These findings are in line with the recent literature on the topic. Nearly a third of American women pregnant during the outbreak of the COVID-19 pandemic feared perinatal infection with the COVID-19 virus [12]. Pregnant women in different countries were concerned about the safety of themselves, their unborn baby and other children's health during the pandemic [8,22,25].

As our respondents perceived the outside world as dangerous, some avoided or postponed care. Delayed health care access is a potential collateral effect of a pandemic which may affect continuity of care and may lead to adverse outcomes [26]. The reported postponed care of our respondents was related to physical therapy only, not to maternity care. The reported avoidance behaviour is in line with the results of a recent study, observing that Turkish pregnant women postponed antenatal care or preferred outpatient care because their feared COVID-19 contamination [8]. This fear of contamination might have a negative emotional effect on pregnant women's experiences [8]. The remarkable fear for contamination in women whose partner works in a healthcare profession, found in our study, has not been reported in literature so far.

Women in our study felt uncertain about giving birth during the pandemic. Women expressed concerns about the exclusion of birth partners in the hospital. The banning of partners from being present at the birth has been one of the biggest concerns for women discussed in social media in Europe [19]. In most European hospitals however, the partner was still allowed to be present at birth during the pandemic, but had to stay in hospital until discharge [19]. In some cases, the latter restrictions were also mentioned, although for most women the visiting restrictions were limited to the birth partner, and no other visitors were allowed. A literature review revealed that women in labour have a profound need for companionship, empathy and continuous support [27]. This support may be compromised by the reduction in visitors allowed to be present in the hospital [28].

Internationally the fear of contamination and changes to hospital policies made women uneasy about giving birth in a hospital, provoking American professional organisations of obstetricians, physicians and midwives to release a joint statement affirming that the hospital is a safe place to give birth, even in a pandemic [21,29]. Also in Belgium a small increase in the demand for a home birth was noticed in April 2020. This increase is not reflected in our study as only a small proportion of our respondents expressed the desire to give birth at home due to fear of contamination. In a press statement the Professional Association of Midwives declared that the COVID-19 crisis cannot be considered a legitimate motivation in itself for considering a homebirth [30]. This position was endorsed by the Flemish Union of Obstetricians and Gynaecologists, even stating that during the pandemic it is safer to give birth in the hospital than at home [31]. Indeed, it is internationally expected that healthcare policy and maternity care practices promotes feelings of safety, control and a positive birth experience in the hospital,

also in a pandemic [21]. While following public health directives, healthcare policy makers should consider ways to improve the experiences of birthing women and ways to help them feel safe and supported [21].

In accordance with a survey in primary care in Belgium [4] we also found women's social support was negatively affected by the lockdown. Feelings of tiredness were reported by many, the combination of the lack of social support, telework and taking care of other children at home was devastating for many. Some reported that they could not recover from childbirth. However, social support from significant others is recognised as an important protective and resiliency factor in pregnancy and might have important implications for perinatal mental health [11].

Many of our respondents were sad that they could not share the unique moments of pregnancy and parenthood with their surroundings during the pandemic. This included the absence of partners during antenatal care, limited visits at the maternity ward, but also more general sharing their experiences with family and friends e.g. showing off their baby bump. Some of our respondents described their pregnancy as hidden, stolen or lost. To the best of our knowledge, this feeling was not described in international literature, although this was a prominent result of our data.

In Belgium, as in other countries, maternity care was under pressure since the COVID-19 outbreak. Non-essential care was suspended and, whenever possible, replaced by online encounters [19]. Real encounters replaced by digital alternatives were reassuring for some of our respondents, although additional home visits from midwives were much appreciated and comforting for many. Also during the pandemic, perinatal health professionals played a critical role in ensuring that the needs of women are met and that the care they receive is the individualized and women-centred [32]. The absence of non-essential care resulted in feelings of unpreparedness and uncertainty about childbirth. This result is in line with a recent study, where nearly a third of US women pregnant during the COVID-19 pandemic was stressed because they felt unprepared for birth [12].

Although many respondents reported negative feelings, the pandemic also had a positive side for a lot of respondents. The pandemic was described as a peaceful period with lots of opportunities to rest. The pregnancy was experienced as an intimate experience between the couple. Usually, mothers faced challenges in defining their new role after childbirth, and welcomed the slowdown in the rhythm of life in this period [33]. Most of our respondents experienced the calmness as enjoyable and some expressed their time together with only their partner as 'quality time'. Some reported that this peaceful period helped them in their preparation for parenthood and facilitated the development a relation with the baby.

Many of our respondents were relieved that maternity visits at the hospital were limited to only the partners, but missed the baby's siblings. Many felt relax, enjoyed their rest and reported a more rapid recovery with less fatigue. Limited visit was mainly beneficial for breastfeeding, women had more time to breastfeed in a relax atmosphere and were less disturbed by visitors. It has been reported in literature that, the lockdown could have had different effects on breastfeeding practices, being more often at home clearly facilitated breastfeeding for many women [4]. However, some women with breastfeeding difficulties reported a lack of real-life support which resulted an early breastfeeding termination.

Implications

It is important to understand the perinatal experiences of women during the COVID-19 pandemic, not only for health professionals but also for healthcare policy makers. Lessons learned from this study can support perinatal health professionals in the organisation of maternity care in the post pandemic era.

Perinatal health professionals did their utmost to provide the necessary care during the COVID-19 pandemic. Face-to-face

appointments were limited or replaced by alternatives. It is important to stress that perinatal health professionals provide the information and support women's needs, also in these exceptional circumstances [8]. The experienced disrupted care made it difficult to establish trust in the healthcare system and the perinatal health professionals. The latter demonstrates that continuity of maternity care remains essential, especially in the event of a pandemic. Perinatal health professionals' role is to guarantee that women and babies continue to receive respectful and safe care they need [19]. Study findings suggest several practices that may be useful to reduce antenatal anxiety during the pandemic. Minimizing disruptions of antenatal care, perhaps with effective use of telehealth appointments, maybe one promising means to reduce women's stress [12]. It is likely that the organization of healthcare in Belgium will undergo sustainable changes following the pandemic, such as the expansion of telemedicine and the integration of telemonitoring and mobile health applications [4]. To ensure good quality of maternity care it is critical to have strong communication applications between health professionals and women to reinforce continuity in the care [17]. Internet-based screening tools, teleconsultations, web-based psychological support and therapeutic care may have an important role in this regard [10].

As the pandemic was experienced as a peaceful and quiet period, offering women the opportunity to telework, slow-down and take the needed time are important take home messages for antenatal care in the post-pandemic era. Many respondents made suggestions to take the restricted visiting policy as an important lesson from this pandemic, by encouraging women to take the needed time to rest and discouraging visits until they feel ready might be a first step into post-pandemic postnatal care.

Strengths and limitations

To our knowledge, this study is the first to explore women's experiences of being pregnant and giving birth during the COVID-19 pandemic in Belgium. Of the 1007 women, 556 women (55%) participated in this study. Although our study yields important insights with regard to understanding women's experiences, this study reflect only the subject experiences of those women who took part in our study. Therefore, the results of this study cannot for sure be considered representative for all women being pregnant and giving birth during the first wave of the COVID-19 pandemic in Belgium. In addition to this, the open question was asked at the end of the third survey. It is unclear to what extent the questionnaire itself may have influenced the answers. Possibly, some women might have not felt the need to add any additional information on their experiences. Interviews might have been more appropriate to gain a more in-depth understanding of the phenomenon of interest. Data were collected in Belgium, a high-income country with a specific maternity care system. One should take into account that the results cannot simply be transferred to other countries or settings [4]. Our analysis was not discussed with participants. However, we did improve the credibility of our results by using investigator triangulation and by including supporting and contrasting literature in the discussion. An appropriate level of transferability is guaranteed by adding a detailed description of our procedures and results [34]. At the moment of data collection, start of the summer 2020, the number of COVID-19 infections decreased and containment measures were gradually relaxed. This might have had an impact on the way women described their experiences, although they were asked to reflect in the open question on the whole period of the pandemic.

Conclusion

This study has demonstrated that pregnant women and women who have recently given birth during the COVID-19 pandemic experienced a multiplicity of mixed and interconnected feelings. Although perinatal health professionals did their utmost to provide the necessary care

during the COVID-19 pandemic, being pregnant or being a new mother during this pandemic was challenging at times. However, the pandemic was also experienced as a peaceful period with a lot of opportunities to rest. Some of the changes such as telework and the restricted visiting policy was a positive experience for the majority of the women. This is an important lesson for the post-pandemic era, by encouraging women to slow-down, take the needed time to rest, and discouraging visits until they feel ready might be a first step. Slowing down might be by giving women the opportunity to work more flexible and remotely. Further research is warranted to obtain more insights in how women want to slow-down their activities.

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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