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Childbirth experience during the COVID-19 pandemic: A qualitative thematic analysis

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ABSTRACT

Introduction: Pregnancy is a period of special vulnerability for the mental health of women. The arrival of the COVID-19 pandemic altered the routines of pregnant women, its effects on this population are thus far unknown. Therefore, the objective of this study is to understand the impact of the pandemic on the birth experience of women during the state of emergency in Andalusia, Spain.

Methods: A qualitative study was conducted with 14 women, using semistructured interviews via telematics. These were recorded and later transcribed using the F4transkript software. In order to analyze the data retrieved from the interviews and identify the main patterns of meaning/responses, the thematic analysis method was applied.

Results: The main emerging themes were 'prenatal medical care', 'hospital safety', and 'postpartum with COVID-19 restrictions'. The results indicated that the reorganization of perinatal medical care, the lack of information, and the fear of contagion were the factors that most negatively influenced the participants. Instead, the security during the birth process and the tranquility in postpartum were the positive aspects of the birth experiences during COVID-19.

Conclusion: This is the first qualitative study in Andalusia that identifies the specific aspects of the COVID-19 pandemic that have affected the mental health of pregnant women. The results contribute to a broader perception of the experience of women and the creation of health protocols for emergencies akin to the COVID-19 pandemic.

Introduction

On March 11, 2020, the World Health Organization (WHO) defined the disease COVID-19 as a pandemic that had spread throughout the world (WHO, 2020). Specifically, in Spain, on March 15, 2020, the state of emergency came into effect, as reflected in Royal Decree 463/2020, to control and prevent infections and protect public health (Official State Gazette, 2020). This Spanish state of emergency implied a series of protection measures that varied according to the health complications of the population. At the beginning of the pandemic, there were protective measures that included cessation of all nonessential activities, lockdown, social distancing, and the use of masks (Oliver et al., 2020). Later, the sanitary measures continued with the curfew, the limitation of social gatherings, and confinement in case of contagion. Finally, the state of emergency ends in May 2021, with the use of a mask as the only safety measure (Ministry of Spain, 2022). The consequences of this situation were reflected in the mental health of the Spanish population, with an increase in symptoms of depression, anxiety, and posttraumatic stress disorder (González-Sanguino et al., 2020). The main risk factors that have been identified as responsible for this increase in symptoms were reduced social support, previous mental health diagnoses, and identification with being a woman (Fenollar-Cortés et al., 2021; González-Sanguino et al., 2020).

Specifically, among pregnant women, there was an increase in symptoms of insomnia, anxiety, and depression by 58.2% compared to their pre-pandemic levels (Arriba-García et al., 2021; Parra-Saavedra et al., 2020). According to various authors, this increase in psychological symptoms among pregnant women during the pandemic could be due to changes in perinatal practices, such as telephone medical appointments, canceled childbirth preparation classes, and changes in delivery plans; to restrictions in and fears of facing complications without accompaniment; to fear of virus exposure; and to concerns with information scarcity, isolation, and lack of social support (Karavadra et al., 2020; Lebel et al., 2020; Reingold et al., 2020). Accordingly, some qualitative studies have indicated that changes in perinatal clinical practices during the pandemic have been an important stress factor for women

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(Sahin and Kabakci, 2021; Silverio et al., 2021). For instance, virtual or unaccompanied prenatal appointments were specific risk factors for postpartum depression (PPD) in women with psychological antecedents (Meaney et al., 2021; Viaux et al., 2020). In this sense, the first studies on the effect of the pandemic on pregnant women showed that the interruption of social life and the lack of support during pregnancy and postpartum were considered risk factors for PPD (Liang et al., 2020; Panda et al., 2021; Rice and Williams, 2021).

Adequate prenatal medical care is key to prevent health issues among mothers and their babies such as gestational diabetes or low birth weight (Asmare et al., 2018; Benatar et al., 2021). These routine checkouts are an opportunity to address parents' concerns and fears, relevant information about the delivery process is offered, preferences during childbirth are discussed, and usual practices that may occur during childbirth are explained (National Institute for Health and Care Excellence, 2021). Based on the existing literature, how the birth process occurs and is perceived affects both the mother and the newborn (Aune et al., 2015). Childbirth is a desired and feared experience (Downe et al., 2018) that has physiological, psychological, and social effects on women (Finlayson et al., 2020; Gordon et al., 2017). In Western society, childbirth is mostly perceived as a physiological process, a perception that ignores the holistic approach that includes psychological, social, and cultural factors that help to humanize childbirth (Miller et al., 2016; Olza et al., 2020). In this sense, Curtin et al. (2022) refer to the challenge that health professionals face providing a humanized delivery, highlighting the importance of trust between the woman and professionals, and that it becomes more complex with the arrival of the COVID-19 pandemic (Mariño-Narvaez et al., 2021). COVID-19 pandemic and its respective safety measures altered the usual routines of both pregnancy and delivery protocols due to health restrictions such as the absence of accompaniment, the use of masks, the impossibility of doing skin-to-skin, or the separation of mother and baby in cases of contagion. There is a lack of evidence on the factors that have affected these experiences among pregnant women during the COVID-19 pandemic. For these reasons, it is critical to listen to the opinions of pregnant women and place them at the center of this process. Thus, the objective of this study is to describe the birth experience of women in Andalusia through semi-structured interviews that were conducted during the Spanish state of emergency that was caused by the COVID-19 pandemic. Identifying the specific factors that have influenced the experience of pregnant women during the pandemic will allow the creation of protocols based on the prevention and promotion of maternal mental health.

Methods

This qualitative study was approved by the Andalusian Biomedical Research Ethics Portal (CI0024-N-21). Information and consent forms indicating that all data collected will be treated confidentially and the withdrawal from the study at any moment without providing any reason were provided to the participants. The reporting of data in this study follows the consolidated criteria for reporting qualitative research (COREQ) checklist (Tong et al., 2007).

Sample identification and recruitment

The sampling was intentional and was performed following the snowball technique. The main author contacted two pregnant women, acquaintances of the authors, to test the interview guide. These two women were intermediaries who asked potential participants if they would be interested in being contacted by the researcher to participate in the research. These women were gatekeepers for the rest of the sample and there were not blind to the study. After accepting this first contact, the author made a telephone call to offer information on the study and ask about the willingness to participate. All the people contacted agreed to participate in the study. A total of 14 participants were recruited according to four inclusion criteria: (a) be a Spanish woman, (b) have given birth in a hospital (public or private) in Andalusia during any of the phases of the state of emergency from March 15, 2020, to May 9, 2021, (c) the childbirth had to be in the last 12 months, and (d) have no cognitive impairment. After confirmation of participation, an appointment was made for each interview by phone or video call, all of them depending on the availability and comfort of the participants. Ten of the interviews were carried out by video call and four by telephone call.

Data collection

The 14 interviews were conducted in Spanish by the first author during the spring and summer of 2021. This criterion of sufficiency was based on previous studies on similar topics (González-Timoneda et al., 2021; Sahin and Kabakci, 2021). Two pilot interviews were carried out to test the appropriateness of the questions without requiring significant changes (see Table 1). The questions were focused on the general experience of pregnancy, childbirth, and postpartum. Specific questions were asked about birth regarding, e.g., expectations, support, control, perceived security, relationship with the medical team and the information received. In addition to childbirth, we include the experiences of pregnancy and postpartum to have an overview of the entire process since these three moments of transition to motherhood directly correlate with each other. These topics were selected after verifying in the scientific literature that they relate directly to whether a childbirth experience is positive or negative (Aune et al., 2015; Downe et al., 2018; Hosseini Tabaghdehi et al., 2020). The interviews lasted between 33 and 66 min and at the end of them, the sociodemographic data of the participants were collected using a self-administered questionnaire.

The interviews were recorded with an audio recorder and the data of the participants were coded from the first contact, and the recordings were stored in an encrypted device. The data were translated from Spanish to English by two bilingual people (see supplementary Table 1 for original quotes).

Data analysis

The thematic analysis approach was used. Thematic analysis is a qualitative research method that identifies, analyses, organizes, describes, and reports the main themes found across the data collected, providing rich, detailed, complex, and reliable findings (Braun and Clarke, 2006; Nowell et al., 2017). The first author carried out the manual transcription of the interviews with the help of the F4Transkript software. This author made the first coding after various exhaustive readings of the interviews, showing the first list of codes that were later discussed and agreed upon with the other authors. After defining the codes, these were organized into themes and subthemes, which were also discussed until a unanimous decision was reached among the authors.

For this research, authors have followed the trustworthiness criteria explored and consolidated in the literature of qualitative inquiry (Braun and Clarke, 2006; Guba and Lincoln, 1989; Nowell et al., 2017; Smith and McGannon, 2018). Credibility was obtained by a continuous peer debriefing of the transcripts, translations, chosen themes, and analysis of the results. Dependability was ensured by the logic of the decisions and choices that were made, which were supported by the literature. Confirmability was obtained through two main strategies. First, the authors triangulated the interviewees' responses with other sources, such as ex-

Table 1
Semi-structured interview guide.

1. General experience of pregnancy during COVID-19
How was your pregnancy experience in the COVID-19 pandemic?
2. General experience of birth during COVID-19
How was your experience of giving birth in the COVID-19 pandemic?
2.1. Expectations
During the pregnancy, how did you imagine the birth to be?
2.2. Perceived support
What do you think of the support you received during the birth?
2.3. Perceived control
What do you think of the decisions that were made during the birth?
2.4. Perceived security
How safe did you feel during the birth?
3. Relationship with the medical team and the information received
What do you think of the treatment you received from the medical team and the information they offered you during the birth?
4. General experience of postpartum during COVID-19
How was your postpartum experience in the COVID-19 pandemic?

Table 2
Sociodemographic characteristics of the participants ($N = 14$).

Characteristics	n (%)
Age	30.6 (3.8)
Relationship status	
Married	9 (64.3)
Living as a couple	5 (35.7)
Educational level	
University studies	9 (64.3)
Higher education	2 (14.3)
Compulsory secondary education	3 (21.4)
Employment situation	
Employed	12 (85.7)
Unemployed	2 (14.3)
Primiparous/Multiparous	
Primiparous	7 (50)
Multiparous	7 (50)
Psychological problems throughout life	
No	14 (100)
Psychological problems during pregnancy	
No	14 (100)
Psychological symptoms during pregnancy	
No	14 (100)
Complications during pregnancy	
No	10 (71.4)
Type of health center	
Public	6 (42.9)
Private	8 (57.1)
Type of childbirth	
Vaginal	14 (100)
Average gestational age at time of birth COVID-19 test before childbirth	39.5 (2.06)
Yes	13 (92.9)
Companion during childbirth	
Yes	14 (100)
Complications during childbirth (Perineal tears, umbilical cord problems, abnormal heart rate, perinatal asphyxia, perinatal death...)	
No	14 (100)

isting literature on the field, personal observations, and hypothesis (Flick, 2018). Second, direct quotes from participants are present throughout the document to better reflect their views. Finally, the transferability of the results can be obtained thanks to the contextual descriptions that we have provided in the main document.

Results

Sociodemographic data

The 14 participants were women who gave birth in Andalusia during the state of emergency that was imposed by the COVID-19 pandemic. Table 2 shows the participants' sociodemographic data and the characteristics of their pregnancy and birth. At the time of the interview, all the participants declared that they had no psychological symptoms or any mental health diagnosis before or after childbirth.

Thematic analysis results

During the interviews, eight subthemes emerged collected into three main themes, which represented the general experience of the women (see Fig. 1). The themes were: 'prenatal medical care', 'hospital safety', and 'postpartum with COVID-19 restrictions.

In general, the birth experience of Andalusian women during the COVID-19 period begins with a pregnancy process characterized by insecurity and uncertainty. Sanitary measures because of COVID-19 modified the usual prenatal medical care. The decrease in face-to-face medical appointments as well as the lack of information on delivery protocols produced feelings of uncertainty, fear, and stress. This caused, at the initial moment of labor, these

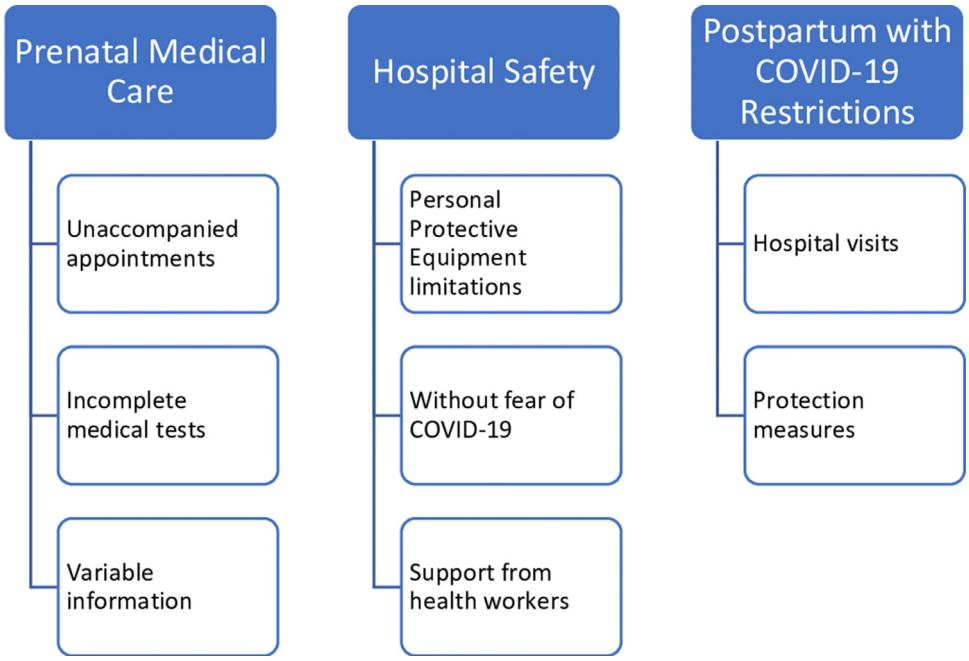

Fig. 1. Main themes of women's general experience.

women to feel distrust when entering the hospital. However, the use of protective measures and the support of health professionals help women to feel safe. After these moments, women felt insecure in the care of the baby because of a lack of support and attention from the nurses and their own families. For these reasons, postpartum was a challenge for all the participants, who had to face insecurity and fear that they or their babies would be infected and the consequences that this could entail.

Prenatal medical care

Unaccompanied appointments. The pandemic caused changes in usual medical routines. Unaccompanied care was a topic that stood out in the interviews, as it provoked feelings of loneliness in women during pregnancy. For example, the mothers experienced sadness when attending medical check-ups without their partners and being unable to share unique moments:

It made me sad not to share it, because they are beautiful moments in your life that you can only share once and you cannot [repeat], you can tell [them], but it is not the same. (P12).

The role of the partner is even more relevant for mothers with complications during pregnancy. They highlighted the support of their partners as a basic need for facing the fear they felt and desired support amid any bad news or complications:

You feel very vulnerable when you know that there may be a problem with the child, and you know that you have to go to the doctor alone and your partner has to be out [of the room]. (P01).

Moreover, the fact that in private consultations they could have companions caused ambiguity regarding the health protocols adding a feeling of discomfort to the anguish that these women experienced. Therefore, thirteen of the fourteen participants who cared for their pregnancy through public health care also completed private consultations to feel more secure, complete medical tests, or have their partner attend the ultrasound:

We spent the money to go and pay for ultrasounds that allowed us both to get in. Instead of six ultrasounds, I had twelve; every time I went [to public health care], I also went to the payment one [private consultation]. (P03).

I have had to pay, for example, so that at least [referring to her husband] could see the baby in a private consultation where the father could get in. (P11).

Incomplete medical tests. The participants of this study had their prenatal care appointments with midwifery professionals. These appointments were by telephone except for those that involved diagnostic tests. Therefore, some of the participants described feeling abandoned by the health system because they did not have any planned medical tests or did not receive their expected care:

The medical appointments during pregnancy were very neglected. I got high blood sugar and [the health workers] practically did not tell me anything [...] We, pregnant women, were very abandoned. (P14).

Another mother indicated that she self-administered a test due to certain recommendations, but she lacked the necessary knowledge:

The streptococcus test, which uses a swab on the vagina and anus, I had to perform it myself in the bathroom [of the health center] with a 37 week belly, in pandemic, times, when you were obsessed and did not want to touch anything. The results came out negative, but I did it wrong because the results of that same test by private health care were positive. (P07).

On the other hand, telephone consultations entailed inconsistency, which generated fear in pregnant women when they did not feel they could adequately gage how they and their baby were doing:

They did not give you an appointment, it was impossible... and by phone appointments, what does the gynecologist wants me to explain, how do I carry the child inside? No. It made no sense. (P12).

Variable information. Health protocols and recommendations have varied according to the information obtained from research on COVID-19. In their stories, some mothers highlighted their lack of knowledge about the pandemic birth protocol, which caused them high levels of uncertainty and uneasiness. In general, the mothers in this study did not receive enough information regarding the presence of their partners during childbirth, the possibility of skin-to-skin contact with their babies, or the potential risk for initial separation from their newborns:

You asked, and, in fact, they told you how today, the protocol is like that, but maybe next week, it will be a different protocol. (P09).

I was afraid of the uncertainty… I didn't know what was going to happen, I didn't know if my partner would be there [during childbirth] … (P06).

Nowadays, many mothers abandon their trust in their resources to trust professionals instead, with the assurance that healthcare professionals have the necessary knowledge to help them and their babies in every circumstance. Therefore, the fact that the participants asked for answers but did not receive them increased their concerns and fears of uncertainty. The health workers did not always cover every basic need, such as safety provided by information:

I was scared that my partner couldn't be in labor with me, the protocols were constantly changing, and I didn't know what measure would be on my delivery date… (P04).

This lack of information was reflected in some womenś decision-making:

The day I went into labor I felt very bad, but I was afraid to go to the hospital and I told my partner that I would not go to the hospital until I saw my daughter's head. I didn't go until I started bleeding and panicked that I might lose my daughter. (P02).

Given the lack of information from health workers, which was due to the constant changes in the protocols, four of the women sought other ways to predict what the birth experience would be like:

To inform me, one who is gossipy and asks people close to me, who had their babies' months before. (P05).

Hospital safety

Personal protective equipment (PPE) limitations. PPE (such as masks) use was implemented in a mandatory way by the health protocols of childbirth. Four mothers identified the mask as a barrier when interacting with professionals and their children:

The mask for me is a barrier. I need to see. I want to kiss. It reassures me to see what faces they make in each situation, it is feedback without words, but for me, it is very important, and the mask took that away from me. (P04).

It is true that all that time I had to be with the mask. It was annoying to caress the child, bring him closer… well, it felt cold, right? (P08).

Another aspect that most concerned these mothers was that the mask interfered with their interactions with their newborns:

It is much sadder, because of course, the beautiful thing is to take him and smile at him; that moment that is beautiful, when your husband comes and there are looks and smiles between the three [of you] is one of the moments that you lose because of the mask. (P12).

Without fear of COVID-19. Even with the general feeling of fear caused by the pandemic, mothers felt safe concerning COVID-19 during their birth and hospital stay. Among the reasons why the women felt safe were the protection measures taken by medical professionals, the diagnostic test of COVID-19 that the women received before birth, and the limitations of visits:

The staff was super protected because apart from the gloves, they had two or three masks, so the truth is that I was very safe. (P05).

Everyone [the health professionals] came protected, with gowns, double masks, hand sanitizer in the room, even to bring you food. (P13).

In general, all mothers in this study agreed that once they felt safe in the hospital environment, they could better concentrate on their labor, where their greatest concern was that their baby would be born healthy:

Once you are admitted for childbirth, you forget about the coronavirus […] There is more fear about how it will be than when you are already in labor. I was not afraid. (P07).

The hospital environment is essential for the smooth development of childbirth. Despite such fear and uncertainty during pregnancy, the medical professionals transmitted the necessary security to the mothers to contribute to a positive experience.

Support from health workers. Even with safety measures, such as the use of PPE and social distancing, professionals focused on making mothers feel more comfortable:

I think they made the effort to make us feel more welcomed […] and that it was an experience as close to a normal birth [as possible]. (P08).

Such closeness was not mirrored by some nurses during the days of hospital admission after birth. In the interviews, many mothers, particularly first-time mothers, commented that they would have liked more support and care from nurses after childbirth. These mothers experienced fears and doubts that they had to face alone with only the support of their partners:

When we got to the room with the nurses, there was some kind of bad feeling […] they tried to explain how to put the baby on my breast, but my girl did not want to, and I asked if I needed help, if I could give her a bottle. They told me, 'I am not going to tell you what you have to do to feed your daughter, you will know and that made me feel bad. At that time, I needed someone to guide me slightly more. (P05).

We were abandoned [by the nurses], that was a disaster, all the children's rooms on the maternity ward were crying, the mothers were calling loudly from the doors asking the nurses to come, please come! And no one came there. (P02).

Due to the security measures imposed, the mothers of the participants could not be present to provide the necessary support to their daughters in either the immediate postpartum. Hence, some of the participants chose to skip confinement and meet with their mothers to receive this support, which was both sought after and necessary for them:

After my discharge from the hospital, I skipped the rules of the pandemic and went to my mother's house for two weeks. […] I needed my mother to tell me how to take care of my son. (P03).

Postpartum with COVID-19 restrictions

Hospital visits. In Spain, visits to the hospital by family and friends are common, but during the pandemic, such visits were suppressed to prevent the spread of the virus and especially for the protection of newborns and their families. In general, this fact was perceived as both positive and negative by the participants. Many mothers deemed these restrictions negative because their relatives could not meet their newborns:

The downside [of childbirth] is that no one can meet the child. You give birth and on the days that you are admitted there [in the hospital], no family member can see [visit] you, and it is sad. (P01).

You like that when [the baby] is born, well, that they come to meet him… That's always good… That's the only thing I've missed… (P10).

On the other hand, five mothers perceived this restriction to be positive. In general, the participants enjoyed the absence of visits by having more time for themselves and their babies, and adapting to their new maternal role:

I appreciated not having visits both in the hospital and at home, because we were super calm, and you are tired and sore when having to receive people at home… (P07).

Protection measures. After returning home, the women experienced puerperium, marked by the pandemic's sanitary restrictions. Their new rhythms of life were complicated by the fear of contagion and the uncertainty of what would happen if the mother or baby were infected. Therefore, what should have been a moment of tranquility and adaptation became a moment of stress and anguish.

To deal with their insecurity and fear of having a newborn during a pandemic, the mothers increased their protection measures, such as avoiding leaving their homes or increasing social distancing when meeting with friends and family:

When I had the child, I did not want to see anyone. I did not want anyone to tell me to meet. I did not want anyone to see my child. Gloves, masks, [etc.,] everything seemed not enough to me, everything. (P03).

The grandmother did not come [to visit the baby] until she was two months old. And I haven't gone out [to the streets]. We only go from my house to my mother's house. The truth is that I was very afraid. (P11).

Even with the increase in these measures, women felt the commitment to attend social visits and had difficulty establishing limits:

At home, I was overwhelmed with the issue of the visits… I said them to put on the masks and wash their hands…I tried that them not to hold the baby… but it was impossible… I had to resign myself. (P06).

Discussion

The main objective of this study was to understand the birth experience of women during the state of alarm generated by COVID-19 in Andalusia through semi-structured in-depth interviews. To the best of our knowledge, this is the first qualitative study focused on this topic after the COVID-19 pandemic. Our findings showed that prenatal medical care, hospital safety, and postpartum with COVID-19 restrictions were the aspects that most influenced their experience.

One of the main results indicates that women wanted to attend medical appointments in person and that they wanted to do so in the company of their partners. Although recent studies indicated women's fear of attending in person due to contagion and even a preference for attending virtually (Akhter et al., 2021; Madden et al., 2020) the results of the present study do not support them. One possible explanation could be that, because of the lack of habit, most women did not feel confident in their capacity to verbalize appropriately their symptoms to the health professional. Another explanation could be that the lack of non-verbal communication may have made women insecure that midwives would understand them. It is also possible that cultural differences among women during pregnancy play a role, explaining why Andalusian women prefer face-to-face contact with their health provider and the accompaniment of their loved ones. Despite telemedicine is a new form of care and it is an opportunity to make prenatal care more flexible based on the specific needs of each woman (Montagnoli et al., 2021; Peahl et al., 2020), it is important to place the woman at the center of the process where she can freely opt for face-to-face, virtual, or mixed medical care depending on the specific needs.

Studies on prenatal care during the COVID-19 pandemic have shown an increase in symptoms of fear, uncertainty, and anxiety (Lebel et al., 2020; Sachin and Kabakci, 2021; Silverio et al., 2021). The lack of information provided during prenatal care, due to the cancelation of appointments or virtual appointments, may have been an important factor influencing the increase of such symptoms. This information was not always available due to the continuous changes in health restrictions and protocols. Thus, the pandemic caused women to have less information and more uncertainties about what giving birth would be like, which in turn made them feel less prepared for childbirth. This discomfort about uncertainty is in line with previous studies indicating that lack of information is related to a negative childbirth experience and to the motheŕs increased fear and anxiety (Giurgescu et al., 2006; Gottfredsdottir et al., 2016; Hosseini Tabaghdehi et al., 2020; Sahin and Kabakci, 2021). It is possible to promote health protocols in the prenatal period based on accurate information. These women, in their routine appointments, must be accompanied by health professionals who will provide them with updated information on delivery protocols, specific to the needs of the woman and her baby, and respond to her doubts, thus providing a protocol that is humanized and respectful for the mother.

Despite possible misinformation throughout the pregnancy, women in this study felt secure during their hospital stays due to protection measures. This result is in line with a previous study that indicated that the numerous protection measures gave them peace of mind against the virus and the privacy of emptier hospitals (Panda et al., 2021). Although prenatal medical care has been compromised during the pandemic, most professionals focused on offering women a normal birth. It is possible that the close support that the health professionals provided was an important factor in helping mothers to perceive their experience as positive and safe. This emotional and practical support is a fundamental element in boosting confidence during labor (Hollander et al., 2017) and could be maintained despite health workers' workload, physical and mental fatigue, and fear of contagion during the pandemic (Akhter et al., 2021).

Another finding that is consistent with other previous studies was that women decided to isolate themselves voluntarily because of their fear of contagion (DeYoung and Mangum, 2021; Kinser et al., 2021). Although Liang et al. (2020) have indicated that concerns about contagion and a lack of social support are risk factors for PPD, the mothers in the present study manifested to have enjoyed the intimacy and tranquility implied by the COVID-19 health restrictions. This way of living postpartum during the pandemic is similar to the puerperium in other cultures. For example, in India, new mothers spend up to sixty days without leaving home and without receiving visits to prevent infections and to bond with their babies while developing their new identity as a mother (Dennis et al., 2007). Postpartum isolation may have some benefits that have not yet been considered in Western societies. Therefore, the social norms at the beginning of motherhood should likely be adapted to the physical and psychological needs of each mother without any societal judgments or demands.

The results of this research provide important insights regarding childbirth in times of the COVID-19 crisis. From a social-health perspective, various related actions can improve the prevention of perinatal mental health. Providing information to women during the COVID-19 pandemic has been shown to decrease general discomfort (Zuo et al., 2022). For this reason, it is necessary for pregnant women and their partners to have easy access to accurate information about the processes of pregnancy, childbirth, and postpartum, as well as the influence of COVID-19 on pregnant women and their babies. These data must be updated to reflect any changes according to the latest scientific evidence. Moreover, it is advisable to create programs where gynecology and obstetrics health professionals receive training on the significance of considering psychological needs during the prenatal and postnatal process to prevent and promote the mental health of women, the family, and society in general (Wang et al., 2022). A more humanized and respectful trend with the empowerment of women where mothers' decision-making is trained and valued will provide a greater sense of capacity and affirmation in the face of the organization of the new identity of women as mothers (Olza et al., 2018).

It is important to highlight those primiparous mothers without information about delivery protocols during the COVID-19 pandemic might have more doubts and fears (Kinser et al., 2021). In contrast, non-primiparous mothers felt less insecure due to their previous experiences of pregnancy and childbirth. This knowledge became a protective factor in the face of uncertainty. This data of-

fers us the possibility to help new mothers create maternity groups led by mental health professionals and mothers with similar experiences that can help create a community of support that calms this symptomatology. Antenatal care groups are not only valid in situations of health crisis but also in situations of medical or social complications providing a positive experience by promoting practical and emotional support for women (Renbarger et al., 2021; Uludağ et al., 2022).

Finally, and although it has not been explored in this manuscript, we consider it critical to promote emotional wellbeing and self-care among health professionals. This is particularly important in times of crisis such as the one experienced during COVID-19 which put the healthcare sector under enormous pressure. Serene, and informed healthcare professionals might improve communication with and trust of patients, offering overall better services.

Strengths and limitations

This qualitative study has highlighted the importance to attend the necessities of pregnant women from their experience. However, there are some limitations to be considered. First, the interviews were not conducted in person and information could have been lost due to the virtual format. Second, this study only evaluates the experiences of Andalusian women, and it would be interesting to understand how other health systems have addressed this situation. Finally, it was not possible to collect the perspective of the health professionals who were involved as it was difficult to contact them due to the workload.

Despite these limitations, one of the main contributions of this study is that it expands the limited literature on this topic. In addition, the qualitative approach used represents strength for the study to be able to delve deeply into the experiences of women and to know the important details on which we can base the health protocols to make changes. These results have provided us with valuable knowledge that can be applied in several situations where childbirth is outside the norm. Therefore, the learnings obtained from the COVID-19 situation can be incorporated into future health protocols, providing concrete information about delivery practices without forgetting the central role played by women. For example, in health crises situations, where centres cannot provide a minimum health service, or in situations of political crisis where women's pregnancy decisions could be affected, and psychological symptoms may be increased.

Future studies need to include a more diverse sample that incorporates different modes of conception and birth, in addition to considering the effects of vaccination on the pregnant population, new strains of coronavirus, and other relevant health restrictions. In addition, it will be necessary to study the consequences of some of the protection measures that are still in place, such as the use of masks in medical centres. Besides, this research is a good promoter to initiate specific research on how these measures continue to affect maternal mental health in the medium and long term. Finally, this study provides a better insight to help create effective maternal group interventions.

Conclusions

The women interviewed in this qualitative study have shown a complex and comprehensive experience of how the COVID-19 pandemic has influenced the antenatal and postnatal process. According to the results of the present study, the reorganization of perinatal medical care, the lack of information, and the fear of contagion after childbirth were the aspects that most negatively affected women, producing an increase in fears, stress, and anxiety. However, the participants highlighted the security they felt during the birth process and the tranquility they experienced when adapting to the maternal role as positive aspects of their birth experiences during COVID-19. These positive and negative aspects that describe the experience of women will help to create humanized health protocols that include the specific needs of women in order to protect maternal mental health.

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Ethical approval

The study was evaluated by the Ethics Portal of Biomedical Research of Andalusia and approved on April 21, 2021, with the code CI0024-N-21.

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.

CRediT authorship contribution statement

María Consuelo Cruz-Ramos: Conceptualization, Data curation, Formal analysis, Writing – original draft. **Davinia María Resurrección:** Conceptualization, Methodology, Supervision, Writing – review & editing. **Yolanda Hernández-Albújar:** Conceptualization, Methodology, Writing – review & editing.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.midw.2023.103669.

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