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Needs, rights and perspectives in the Birth Care Pathway during COVID-19 lockdown in Italy: the BiSogni Study, an exploratory qualitative research

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Abstract

Background With the COVID-19 emergency, the provision of healthcare had to be reorganized. Community Health Services for Families of Trieste adopted new methods to ensure continuity of care and the maintenance of the Standards and Good Practices of the Baby Friendly Initiative of UNICEF for the Birth Care Pathway.

The aim of the study was to identify the perceived needs of women, couples, caregivers, and health professionals during the COVID-19 pandemic and evaluate new healthcare strategies, identifying weaknesses and strengths, and future developments.

Methods This was an exploratory qualitative study, using online Focus Groups (FGs) with mothers, fathers, pregnant couples, grandparents, peer breastfeeding support mothers' groups, and healthcare professionals (HCPs). The sample was purposeful, selected through the district healthcare network. After obtaining participants' consent, FGs were recorded and fully transcribed. Transcripts underwent deductive and inductive categorical analysis using Nvivo12 software.

Results Ten FGs were conducted with 86 participants. Situations of increased vulnerability were reported by women who experienced significant levels of loneliness during pregnancy, childbirth, and the first months of their child's life. Regarding healthcare pathways, inconsistencies in the information provided by healthcare services emerged, due to the lack of clear national guidelines for managing childbirth during the pandemic. A controversial healthcare practice was the widespread exclusion of partners from antenatal care, prenatal diagnostics, labour, delivery, and postnatal care. After a period of uncertainty and fear experienced by families and HCPs, significant improvements in the organisation of community and hospital services were described. This was aided by telemedicine, which re-established a sense of care and connection.

Positive aspects of the lockdown included a major presence of fathers who could work from home, share daily life with their partners, and take care of their children.

Conclusions The COVID-19 emergency has reshaped the provision of healthcare, even in the field of childbirth. Innovative methods have proven to effectively address new needs resulting from physical and social distancing. These strategies could promote sustainable organisational approaches for managing childbirth care. Our results highlighted

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how policies and practices for future healthcare emergencies could ensure adherence to best practices and promote patient's rights.

Keywords Birth Care Pathway, COVID-19, Qualitative research

Introduction

The rapid onset of the COVID-19 pandemic caused a significant public health emergency, requiring a complete overhaul of the Italian National Health System (NHS) [1, 2]. Italy, one of the first severely impacted European countries, enforced a series of containment measures including lockdowns, social distancing protocols, the closure of businesses, and travel restrictions to contain the spread of the virus [2–4]. Pregnancy and puerperium are particularly vulnerable phases for women, making them more susceptible to the impacts of the pandemic and its control measures. The fear of viral transmission, social isolation, loneliness, and uncertainty regarding novel care pathways are some of the potential effects of the pandemic on maternal and paternal well-being [5–8]. In fact, there is evidence of a marked decline in antenatal checkups in some countries [4, 9, 10]. All these factors emphasise the importance of evaluating the impact on women during pregnancy and postpartum [11], especially during the first and second wave of the pandemic in Italy, in order to guide action. Throughout the pandemic, other studies have confirmed the increased risk of anxiety and depression among women both during pregnancy and in the postpartum period [12–17], raising concerns about a potential threat for babies through an epigenetic mechanism [18, 19]. Understanding the risk and protective factors that influence maternal health during pregnancy and the postpartum period remains a key area for investigation.

Healthcare professionals dedicated to antenatal and postnatal care have similarly suffered the impact of the pandemic. Seeman et al. documented higher levels of stress and anxiety among staff, underlining the importance of planning strategies to deal with the health emergency, which remains a priority [20, 21].

In this paper, the term "Birth Care Pathway" includes antenatal, perinatal, and postnatal care, care for children aged 0–2 years, as well as maternity and paternity care. This care pathway has been formalised by the 'Azienda Sanitaria Universitaria Giuliano Isontina' (ASUGI), as one of the standard provisions of care within the 'Baby-Friendly Community Initiative' for the protection, promotion, and support of breastfeeding (see: Additional file 1) [22]. ASUGI plays a central role in healthcare, providing services in both hospital and community settings, along with academic education and research [23]. Their Community Health Services for Families (Consultori Familiari, CHSF) adopt a multidisciplinary approach to promote health strategies and offer comprehensive support for low-risk pregnancies, emphasizing family empowerment [24, 25]. The "Baby Friendly Community" (BFC) of Trieste adheres to the Italian UNICEF Standards and Good Practice [26, 27] and follows a continuity of care model with midwives as primary Case Managers [22, 28]. This includes pregnancy care, antenatal group meetings, post-discharge care for mothers, fathers, and infants, puerperium care, breastfeeding support, and meetings with parents. All these interventions are in line with the Nurturing Care and Early Child Development framework, benefiting the health and well-being of mothers, fathers/partners, and children [29–31].

During the first wave of the COVID-19 pandemic wave, restrictions on gatherings and access to health services challenged the usual ways of holding individual, group, and network meetings. The need expressed by women for support and closeness to their midwives during that time has led HCPs to explore new methods and means of providing health services. The CHSF of Trieste has therefore committed to keep providing the Essential Levels of Care (ELC) [32, 33] and the Baby-Friendly Initiative (BFI) Standards of Good Practices throughout pre- and postnatal Care [26, 27].

Due to significant transformations occurring within global healthcare systems and the adjustment of daily routines, a comprehensive exploration of population responses to these changes have become necessary. This is particularly crucial for the development and implementation of effective pandemic preparedness plans [10]. Examining the experiences of women, men, couples, caregivers, and health professionals involved in the Birth Care Pathway could be useful for planning care that responds as adequately as possible to the evolving needs of the population during the pandemic and humanitarian emergencies in general.

Objectives

The study *BiSogni* aimed to explore the perception of women, couples, partners, caregivers, and healthcare professionals, during the first wave of pandemic COVID-19, regarding their changing needs, feelings, and expectations during the antenatal and postnatal period in relation to the pandemic restrictions, as well as the development of innovative communication methods between families and CHSF.

The title of this study, *BiSogni*, combines the Italian terms *'Bisogni'* (Needs) and *'Sogni'* (Dreams). It describes our intention to explore and understand people's needs and expectations along the Birth Care Pathway during the COVID-19 lockdown in Italy.

The three specific objectives of this study were to describe:

1. The needs, feelings and expectations of women, couples, partners and other caregivers (e.g. grandparents) during the COVID-19 emergency.
2. The perception of HCPs about their own needs and feelings, and the needs of women, partners, and caregivers.
3. The new care provision strategies, through a participatory assessment and identification of strengths, weaknesses, and future developments.

Methods

An exploratory qualitative study was conducted through the application of focus group methodology. The participants were voluntarily enrolled by the CHSF midwives during the antenatal group meetings (AGMs), with no dropouts. After obtaining verbal consent to participate in the study, the midwives sent the privacy information form and the informed consent for participation. Participants signed the informed consent before the start of the FGs, and they received the link to connect to the FGs. The socio-demographic data were collected anonymously through a link to the structured online form, which was sent shortly before the FGs.

Ten Focus Groups (FGs) were conducted to collect the opinions of relevant stakeholders. Participants were recruited through purposeful sampling [34, 35], and each FG was tailored to specific participant groups included mothers, fathers, pregnant couples, grandparents, peer breastfeeding support mothers and healthcare professionals. The FGs were conducted from April to June 2020, during the first wave of the pandemic (February – May 2020), when there was a total lockdown in Italy. They were facilitated by female experienced researchers of the Italian National Institute of Health (AG, FZ, FM, GT), with expertise in qualitative studies and maternal and child health, using a semi-structured set of questions, that were specifically developed for this study (Additional file 2). No observers were present during the FGs. The guide for the FGs was developed with the contribution of all the research team. The participants were introduced to the interviewers just before the focus groups began. During this introduction, the interviewers briefly outlined their role, the purpose of the research, and the context of the study. However, no personal goals or specific reasons for conducting the research were shared to maintain a neutral and professional approach, focusing on creating a comfortable environment for open discussion. Each FG lasted around 90 min; the average duration of the focus groups was 92 min (range: 84 to 106 min). Sessions were audio-recorded via the web application (Copyright © 2023 Lifesize), and fully transcribed.

Data collection took place at the Experimental Center of ASUGI. One member of the research team collected the data, which were stored using the information technology infrastructure provided by the coordinating Center of ASUGI.

The data were stored on an ASUGI server protected by passwords and controlled access measures. The transcripts were independently read and coded by two authors (GT and FZ), who then discussed the tree-node categories. In case of disagreement, a third author (AG) was involved. Most categories were defined in advance according to the main research question (deductive approach) while additional categories were identified during the coding process (inductive approach). The software used to support the qualitative analyses was NVivo12 Plus. A qualitative descriptive approach [36, 37] was adopted to obtain a rich description with the lowest possible interference, and ensuring consistency of the various themes and potential connections with the text. The focus groups were conducted until data saturation was reached, defined as the point at which no new themes or concepts relevant to the research question could be identified from the data. Data saturation was reached after the tenth focus group, at which point no new codes were identified. In our study, data saturation was achieved with a sample size that was not overly small. The study was conducted shortly after the outbreak of the COVID-19 pandemic, exploring a new phenomenon within the childbirth care pathway The study was reported according to the COnsolidated criteria for REporting Qualitative research (COREQ) checklist (Additional file 3) [38].

Ethics approval

The study was submitted and approved by the Friuli Venezia Giulia Regional Ethics Committee (CEUR- prot. n. 16,724 del 20.05.2020). This included the approval of the Data Protection Office and GDPR adherence of the online web app.

Results

Sociodemographic characteristics

Ten FGs were conducted, involving a total of 86 participants. The participants included women at various stages of pregnancy ($N=12$), from early pregnancy to full term, pregnant couples ($N=11$), postpartum women ($N=16$), fathers ($N=5$), grandparents of 0–12 months

children ($N=16$), peer breastfeeding support mothers ($N=7$) and HCPs ($N=19$) from both the hospital and the CHSF in a multi-professional group. The mean age of the participants was: 33.6 years (24–41) for pregnant women, 34.7 years (range 27—45) for women after birth, 36.2 years (28–48) for pregnant couples, 65.3 years (53–75) for grandparents, 43 years (29–64) for HCPs, 41.1 years (32–47) for peer breastfeeding support mothers, and 40.4 years (34–50) for fathers.

The educational level of the participating mothers and fathers was high, with 24 of them holding a degree or postgraduate qualification, and 15 having completed high school. Additionally, 3 participants had secondary school education, and 2 had completed elementary school. Among the HCPs, there were 10 midwives, 5 nurses, 2 neonatologists, 1 gynaecologist, and 1 psychologist.

Table 1 provides a more detailed description of the participants' characteristics. The identified themes were: the needs and feelings of women, fathers, couples, grandparents, and healthcare professionals during the COVID-19 pandemic; coping strategies to enhance the well-being of these diverse groups; the provision of healthcare services, including an assessment of their strengths and weaknesses. The main themes identified during the discussion are presented below. An overview of the main themes and categories resulting from this study is presented in Table 2.

Needs and feelings during the COVID-19 pandemic

Mothers, fathers and couples

Several needs and feelings were mentioned. The most common ones included the presence of a partner, the need for support, fear, and the need for consistent information.

Every pregnant woman expressed the need for *the presence of her partner in hospital* during labour and delivery and the fear of his/her absence.

> *Pregnant woman: "...thinking of myself during labour without my husband next to me was worrying because, from a psychological point of view I would've lost his support at that moment. His presence relieves me from the pain that you feel in that time."*

Likewise, fathers expressed the concern that they were not be *able to support their partners* during childbirth and that separation could affect their *bonding with the baby*.

> *Father: "I remember that it was not a day of total joy, because until I entered the hospital I was worried about my partner, my child, about everything. Not having news for 12 hours makes you feel helpless because you don't know what to think, what to do, what to say or whom to call."*

> *Father: I was a bit afraid that immediately after the birth my baby girl wouldn't recognize me"*

Many couples experienced significant moments of *loneliness and exclusion* during antenatal and postnatal care. Indeed, fathers were excluded from obstetrical check-ups, ultrasounds, and prenatal diagnosis, as well as from being present during labour, childbirth, and hospital stays, all in an effort to mitigate the risk of contagion. These circumstances have led to profound feelings of isolation and helplessness, intensifying worries and anxiety. Certain decisions made by women, including breastfeeding, have been impacted by these challenges and by the partner's absence.

> *HCP: "I have listened to the testimony of mothers who were truly affected by the absence of the father during the postpartum period. They told me that certain decisions, for instance, regarding breastfeeding, were strongly influenced by the sense of solitude, that is, the father's absence."*

On the contrary, some choices that were forced by the pandemic, such as the *opportunity to work remotely* for both parents, resulted in an increase of the time parents spent together. The major presence of the father at home during pregnancy and the baby's first months of life related to remote work was one of the most discussed topics. Due to the closure of work activities and the possibility to work remotely, fathers spent more time with their family, and lived this experience positively, confirming the need to guarantee adequate *paternity leave*.

> *Father: "I had 5 days of parental leave available. I took them almost immediately ... you realise objectively that the role the father from the point of view of legislation and welfare is practically zero."*
> *Mother: "Smart Working is one of the positive things of this period because otherwise I should've returned to the office much later and used up all my annual leave, instead (...) I've come back to work earlier with the possibility to stay at home every other day."*

During lockdown, the *presence of the fathers at home* was reported as a positive experience, because they felt actively engaged, like protagonists, in the care of their new family, sharing daily life with the partners and their children.

> *Father: "We also experienced the pregnancy twenty-four hours a day together, and it was nice because, of course, as the others said, in normal times we definitely wouldn't be together all this time so...having lunch together, being together at the distance of a room, allows for dialogue like you couldn't have at work."*

Table 1 Socio-demographic characteristics of FCs participants

Focus groups (FGs) participants (*N* = 86)			FG Women in pregnancy (*N* = 12)	FG Pregnant couples (*N* = 11)	FG Women after birth (*N* = 16)	FG Fathers (*N* = 5)	FG Grandparents (*N* = 16)	FG Health professionals (*N* = 19)	FG Peer mothers (*N* = 7)
Mean age (range min–max)			33.6	36.2	34.7	40.4	65.3	43	41.1
			(24—41)	(28—48)	(27—45)	(34—50)	(53—75)	(29—64)	(32—47)
Education	Degree Postgraduate		8	5	8	3	4	—*	6
	High School (13 classes)		3	2	8	2	8	—	1
	Secondary School (8 classes)		1	2	0	0	4	—	0
	Elementary School (5 classes)		0	2	0	0	0	—	0
Marital status	Married/Cohabiting		11	11	14	4	16	—	—
	Unmarried/Single		1	0	2	0	0	—	—
	Divorced		0	0	0	1	0	—	—
Previous children	Yes	1	2	7	9	4	—	—	—
		2	0	0	2	1	—	—	—
		3	0	0	1	0	—	—	—
	No		10	4	4	0	—	—	—
Occupation before COVID-19	Full time stable		8	10	8	5	14	—	—
	Part time stable		1	0	3	0	0	—	—
	Freelance		1	0	2	0	1	—	—
	Housewife		0	0	1	0	1	—	—
	Unemployed		1	1	1	0	0	—	—
	Precarious employment		1	0	1	0	0	—	—
Current housing situation	With partner		10	7	14	4	11	—	—
	With partner; With other children		0	4	2	1	0	—	—
	Alone		0	0	0	0	3	—	—
	With family members (no partner)		0	0	0	0	2	—	—
	With partner and family of origin		0	0	1	0	0	—	—
Situation about SARS-CoV-2 infection	Suspected infection		0	0	0	0	0	—	—
	Positive swab		0	0	0	0	0	—	—
	None of the above		12	11	16	5	16	—	—
	Altro		0	0	0	0	0	—	—
Types of delivery	Vaginal		—	—	16	—	—	—	—
	Caesarean section		—	—	0	—	—	—	—
Mean gestational age			35w	36w	—	—	—	—	—
Grandchildren (only for grandparents)	Reason for attending the AGM	Grandparent of child < 1 years	—	–	—	—	14	—	—
		During Pregnancy (future grandparents)	—	–	—	—	2	—	—
	First Grandchild	No	—	—	—	—	13	—	—
		Yes	—	—	—	—	3	—	—
Types of Health Professionals (n = 19)	Midwife		—	—	—	—	—	10	—
	Nurse		—	—	—	—	—	5	—
	Neonatologist		—	—	—	—	—	2	—
	Gynecologist		—	—	—	—	—	1	—
	Psychologist		—	—	—	—	—	1	—
Sex of FGs participants	Men		0	5	0	5	4	0	0
	Women		12	6	16	0	12	19	7

* *"—" do not be collected data for these categories*

Father: "In this long period of almost a month and a half/two staying at home so assiduously has made it clear, especially for those who are at their first experience, what the relationship with the child actually is".

Being at home during the lockdown allowed fathers to dedicate time not only to their new baby, but also to the older siblings. This protected time was not always enough to manage the job as well. In some cases, the fathers found it difficult to combine remote work and the care for the children and the partner.

Table 2 Main themes and categories identified in the study

MAIN THEMES	SUB-THEMES	CATEGORIES
Needs and feelings during the COVID-19 pandemic	***Mothers, fathers and couples***	• *presence of the partner in the hospital* • *support to the partner* • *bonding with the baby* • *loneliness and exclusion in the Birth Care Pathway* • *opportunity to work remotely* • *paternity leave* • *presence of the father at home* • *fear of contagion* • *sense of guilt* • *family social support* • *feeling of social isolation* • *protected time for the family* • *sharing the motherhood experience* • *provision of information* • *continuity of care and support from HCPs during the Birth care Pathway*
	Caregivers/grandparents	• *family separation* • *fear of contagion*
	Healthcare professional (HCP)	• *confusion and tiredness* • *sense of guilt* • *fear of contagion*
Coping strategies for well-being	***Mothers and fathers and couples***	• *focusing on pregnancy* • *sharing with other women during AGMs* • *exploiting outdoor spaces* • *daily presence of the fathers at home* • *making decisions without external interference*
	Grandparents	• *found solace in the serenity of their daughters and partners*
	HCPs	• *focusing on mother-babies relationship* • *cohesion of the teamwork* • *being part of the Italian Baby Friendly Initiative network*
Provision of care of health services	***Weaknesses***	• *delays in disseminating information on available services* • *delays in the provision of some healthcare services* • *ineffective or poor communication among different healthcare services* • *uncertainty among HCPs about what to communicate to women and informal caregivers* • *exclusion of the father* • *rise in voluntary hospital discharge following childbirth* • *difficulties of HCPs in complying with restrictions on parental presence and physical distance* • *limited support and protection from top management* • *inequalities and limitations in the use of digital devices*
	Strengths	• *close and timely provision of care* • *availability, sense of being taken care of by CHSF midwives* • *sustaining communication and relationships through digital technology* • *timely support from peer breastfeeding support mother associations to mothers and families*

Father: "(with remote working) I personally had the concern of having the work done, trying to close every task in time, and then dedicate myself to the child, so that my partner could have some rest. Consequently, it was all a jumble of ... of emerging concerns".

A common concern was the *fear of infecting the rest of the family*. Fathers who went to work were afraid of infecting their partner and children, both during pregnancy and after childbirth. In addition, a *sense of guilt* emerged as they left their partner alone at home to take care of the children. Furthermore, as a result of the lockdown and other restrictions, there was a lack of *family members' social support* (e.g. grandparents, friends), particularly in the first weeks after childbirth, a period marked by potential increased vulnerability.

Father: "You're well aware that bringing COVID home is not a pleasant sight. The guilt of leaving your wife at home with two children, knowing very well that she can't leave the house, and you have to manage... and she struggles to go out with the stroller".

In fact, the couples reported greater difficulty in managing their family. Some women reported the challenges they faced in managing their children due to prolonged school and day care closure. They thought it was absurd that "*bars were opening but schools were not!*".

Mother: "I would like to emphasise that families are somewhat left in disarray, you know, at various levels, both in terms of government and regional decisions. I mean... closing down all the schools! [nurseries, preschools and schools]"

The feeling of *social isolation*, caused by lockdowns and restrictions, has been described as an "*emotional sacrifice*" due to the inability to meet with relatives and the constraints on travelling between cities, particularly for families living in separate locations. Consequently, numerous grandparents were limited to connecting with their grandchildren through photos and video calls for several months.

Mother: "Surely the needs were also to have more help, obviously greater support from our own families, which unfortunately could not happen due to the prohibitions that were clearly imposed on us by the ministerial decrees."

Despite the absence of support from their relatives and social network, some women and HCPs recognized the need of having *protected time for the family*. This enabled them to experience and strengthen the new family dynamics without external interference.

All women, whether pregnant or in the post-partum period, expressed the *need to live and share their experience of motherhood* with others. They felt deprived due to the social distancing imposed by the pandemic. This increased need for sharing was confirmed by peer breastfeeding support mothers from local associations, who reported an increase of participation in online meetings during the lockdown compared to the pre-pandemic period.

Mother:"In the later stages of pregnancy, which coincided with the health emergency, we found it somewhat challenging to share our feelings and emotions with couples of friends who were also on the brink of parenthood and facing their own difficulties".

Since women were isolated, they experienced a reality of motherhood that was very different from their expectations.

Mother: "Then, for the rest, let's say... I don't really want to be pessimistic or anything, but... for me it hasn't been a pleasant period like I expected it to be, you know. Because everyone says, 'Oh, the first pregnancy, it will be beautiful, in spring, you'll go out, take many walks in the sun,' and then... I don't know... and yet, initially, we couldn't go out anyway."
Partner: "My wife expected in this period of motherhood to be able to go out more, to go for walks with other mothers and to do different activities, unfortunately this thing was absolutely missing".

The participants highlighted the need for *timely and consistent information* concerning the risks associated with infection during pregnancy and the initial days of life. They experienced a sense of loss, increased by the alarming information conveyed through mass media. As a result, expectant couples encountered a dearth of reliable points of reference.

Pregnant woman: "What perhaps created a little more problem was the fact of not ... oh yes, that information changed every day."

In this atmosphere of fear and uncertainty, it became crucial for women to receive greater empathy and support from HCPs during the Birth Care Pathway. Maintaining *continuity of care and support from HCPs in a community-hospital-community continuum* was very important for women, in addition to having access to a reliable source of information. In light of this, CHSF introduced online AGMs, providing expectant mothers with the opportunity to engage, share their emotions, and address feelings of happiness, fear or anxiety. Furthermore, the presence of midwives to offer support and clinical advice with breastfeeding, newborn care, and addressing potential challenges that may arise within the new family was beneficial during the initial weeks while being at home with the baby.

Pregnant woman: "I would say that the primary need of pregnant women during COVID is continuity of healthcare even at a distance, as they have done for the AGMs [...] and that they are very well organised even with the hospital."
Pregnant woman: "knowing that you have someone who listens to you, someone to turn to, have some confirmation that AGMs continue to exist ... Now I am attending the AGM because I am pregnant and I see that many mothers thought that this course was suspended. Having discovered that instead the courses were there even online, and that midwives of the CHSF were also available by phone, in short, it certainly gave us, especially in those weeks, something positive that made you feel better, quieter."

Caregivers/grandparents

During the FGs, the grandparents described this period as extremely challenging for various reasons. They experienced the suffering of *family separation,* to maintain physical distancing from their sons, daughters and grandchildren. They felt sad for not being able to partake in the pregnancy and offer support and assistance during this time. Following birth, not being able to see the newborns and other grandchildren due to restrictions was challenging, evoking the fear of not being recognized by the children.

> *Grandparent: "it was an experience I won't forget, we'll never forget and neither will my daughter... it was a really hard, hard experience ... the only grandchild, the first and the only one for the moment, and it was very hard as it is for everyone I think".*

Technology provided support through video calls and helped to alleviate the challenges of isolation and the absence of emotional connection during this period. Nevertheless, the opportunity to be physically close, offer support, and meet their grandchildren in person was irreplaceable.

> *Grandparent: "I'm very sorry because even though there are contacts by video calls and we have seen them every day, but the human contact, the touching, the hugging, all these things are missing and the child suffers' '.*

Grandparents, mothers and fathers expressed the *fear of contagion*, a risk that could be heightened for grandparents due to their age and comorbidities. As the stringent lockdown measures eased, families were able to reunite to some extent, yet with a persistent apprehension regarding close interaction with grandchildren for fear of virus exposure. Therefore, everyone tried to adhere to social distancing measures, even if it caused emotional distress among family members.

> *Grandparent: "There's a lot of uncertainty about how close we grandparents can get to our grandchildren to avoid getting infected"*

HCPs

HCPs reported higher levels of stress due to the ever-changing daily instructions, generating *confusion and tiredness*. The new distancing rules changed the way they worked and, like women, they needed human contact for their caring role. They felt deprived of their role "*which is not just technical*", experiencing a *sense of guilt* as "*half professionals*", providing "*half care*". Especially in critical situations, some HCPs expressed the need to find strategies to stay close to parents and children (e.g., in the Intensive Neonatal Care Unit or during labour and birth) and addressing women's feelings of loneliness. This need overcame the fear of contagion. Moreover, they needed to share the new problems and ideas and to collaborate with other colleagues, in hospitals or CHSF, and to develop new strategies for care provision. This was essential to support women and families and manage the Birth Care Pathway, which required a total reorganisation.

> *HCP: "What frustrated us most was the management of the COVID-19 pathways, such as handling suspected cases and determining when to conduct testing, from a practical standpoint. We ran the risk of losing sight of the woman and labour care entirely, as the most critical aspect shifted to COVID, making as of no other medical condition existed anymore."*

HCPs also recognized the need for *protected time for the new triad* during hospital stay.

Moreover, they needed protection and a sense of safety as providers of care, as they feared the *risk of contagion for themselves or their families*. Some HCPs reported difficulties, as parents, in caring for their own children due to being categorised *'at risk of infection'* because they were healthcare workers. Furthermore, they shared that their children expressed confusion, questioning why they persisted in working despite the ongoing emergency.

> *HCP: "Even in my own home, there have been problems. [...]. And at a certain point, it made me feel like a pariah, honestly."*

Coping strategies for well-being

Mothers, fathers and couples

Some women reported that being pregnant was a source of well-being in itself during COVID-19 pandemic, as it made them feel less alone and *focused on their pregnancy and foetus* rather than on the health emergency.

> *Pregnant woman: "having little legs, little feet kicking around in my tummy, felt really good"*

The opportunity to attend the online AGMs guaranteed the continuity of care provided by midwives, while also offering the possibility to share emotions, doubts, information and strategies with other women. Through these online meetings, women could focus on their pregnancies, receiving professional support and reassurance.

During lockdown, having a house in the countryside or with a garden or outdoor spaces was important to experience it more peacefully and alleviate the sense of confinement.

Mother: "Especially being able to go out because I think I would have gone crazy if I had been locked in a flat for two and a half months and with a baby, and I also needed to breathe some air"

The daily presence of the fathers at home was also a source of well-being. They took care of the household and the babies, cooked healthy meals together, provided support for breastfeeding, and were more engaged in seeking information about pregnancy and breastfeeding.

Mother: "behind me is this big picture that was made by daddy during the COVID, it's priceless to wake up every morning all together, the little girl is really happy"

Partners had the opportunity to spend quality time with their children, without being "*in a hurry*". The HCPs emphasised the importance of parents being able to make decisions without interference from relatives. For new families, this period offered a chance to establish their own routines and meet their children's needs at their own pace. Since they were alone, they could focus on taking care of their baby and building family stability.

HCP: "...these parents who finally felt entitled to decide freely for their child!"

Regarding the reduction of external interference, while the exclusion of partners from the hospital was stressful, the restriction on hospital visits for relatives and friends after birth was deemed beneficial for new mothers. They reported being able to focus on breastfeeding, baby care, and their own recovery. Moreover, women could put in place strategies to help each other. For example, foreign women who did not speak Italian were helped by their roommates.

Mother: "Frankly, I was happy to be alone with the baby [in hospital]... not having anyone to come... then also, in the situation I was in, not having to worry about getting dressed and groomed "
HCP: "You could see the mum from Trieste using Google Translator to translate for the mum from Turkey in order to share. They were laughing... 'We made a team!' The Maternity rooms become like classmates, saying, 'We help each other.' It was remarkable."

Grandparents

During isolation at home, despite the imposed social distancing, grandparents found solace in the serenity of their pregnant or breastfeeding daughters. Furthermore, the reassuring support from healthcare providers and partners, both during hospital stays and at home, provided comfort.

Grandmother: "I truly benefited from feeling the serenity with which my daughter approached pregnancy and breastfeeding... She faced everything calmly, together with her partner, and we would see them every day [via video call], peaceful and calm. She gave me strength because I used to worry, and she would say, 'Mom, what are you worrying about?'"
Grandmother: "I felt at ease due to the healthcare available here in Friuli. I consider it to be very good because the fact that they call you, these online meetings with other mothers, especially during this period of isolation, they weren't left alone."

HCPs

Similar to women, due to hospital restrictions on visitors, HCPs experienced reduced stress, allowing them to focus on the mother-baby relationship. They mentioned that during hospital stay there were no disruptions to breastfeeding or external interferences that could generate misunderstandings. In these working conditions they were able to provide more effective care for both women and their babies.

HCP: "The chaos that existed in the ward before created a lot of confusion and a lot of problems, especially, I think, for breastfeeding and new mothers who found it difficult to breastfeed with so many strangers in the room".

Regarding the work environment, both in hospital and community services, the cohesion of the *team* was essential to cope with the emergency. This approach was very helpful especially when the information and protocols changed so quickly, generating many difficulties in the workplace.

HCP: "in this moment of such great difficulty at work, my colleagues and I have really rediscovered the idea of the group with solidarity towards each other [...], working with my colleagues has been a wonderful experience"

Being part of the Italian UNICEF network within the national Baby-Friendly Initiative provided an opportunity to meet, exchange ideas, and receive feedback on the quality of healthcare practices during a time of significant uncertainty.

HCP: "One of the most wonderful aspects of this period have been the online meetings organised by the Baby-Friendly Community and Hospital networks provided by UNICEF. Personally, I gained many insights from these meetings that I could incorporate into my own healthcare service, includ-

ing different ways of approaching things. Additionally, it was a valuable opportunity to connect with other Italian cities that were experiencing the same difficulties. It was crucial, truly one of the highlights of this period."

Provision of care of health services

Weaknesses

The participants highlighted the strengths and weaknesses of healthcare services during the first wave of the COVID-19 pandemic (Table 3). Several weaknesses emerged in the context of COVID -19 lockdowns, particularly concerning the timely dissemination of information about available services and the delivery of healthcare. Additionally, especially in the first phase of the pandemic, there was a significant lack of communication among healthcare services to inform the population about service provision along the Birth Care Pathway. In fact, HCPs faced uncertainty about what to communicate to women and caregivers due to the constantly changing information related to COVID-19, which was a notable weakness. Other weaknesses pertained to restrictions during pregnancy check-ups and hospitalisation. Fathers were often considered regular visitors and, as a result, were frequently excluded from pregnancy check-ups, labour, delivery, and hospitalisation. Additionally, HCPs encountered difficulties in complying with restrictions in Neonatal Intensive Care Units and emotionally challenging situations, such as accompanying babies at end of life. Lastly, technology emerged as an issue with an ambivalent connotation. Its limitations and weaknesses were related to its inability to fully replace human contact, referred to as "*relational distance*", and the disparities resulting from unequal access to digital devices and internet connectivity between people of different social classes.

Strenghts

During focus group discussions, some strengths regarding the close and timely monitoring by both hospital and community services during pregnancy emerged. Additionally, participants appreciated the availability, comfort and reassurance provided by CHSF midwives through phone calls, video calls, WhatsApp or by home visiting, whenever women needed. In the CHSFs, fathers were granted access in person, recognized as an integral part of the family unit while adhering to safety regulations. The strengths related to the use of technology included the use of digital supports to facilitate human interaction, enabling meetings with relatives, parents, women, babies and contact with HCPs. AGMs and PGMs were conducted online, and safe, time-saving solutions for administrative tasks, such as online newborn registration in the national health system, were implemented. Timely support from peer breastfeeding support mother associations to mothers and families, particularly when health institutions faced difficulties, was also noted as a strength. Lastly, the perception that health services were exerting their utmost efforts emerged.

Discussion

The results of our qualitative research have provided an overview of the needs and feelings experienced by various groups involved in the Birth Care Pathway during the COVID-19 pandemic. Several themes emerged, reflecting the challenges and opportunities encountered by these groups during the healthcare emergency.

The rapid spread of the COVID-19 pandemic resulted in multifaceted consequences for individuals' social lives and overall well-being. In our study, a central theme emerged regarding the emotional and practical needs of mothers, fathers, and couples. The absence of partners during labor and delivery, and the fear of this absence, had a profound emotional impact. The presence of the partner in the hospital during labor and postpartum was considered by mothers as an important physical, emotional, and psychological relief and support during childbirth. The deep-rooted need for this support reported by all pregnant women, revealed a critical aspect for emotional well-being during this period. Several authors support the idea that COVID-19 has significantly affected mental health during pregnancy and the perinatal period, leading to an increased incidence of anxiety and depression with possible long-term effects also on newborns [14, 15, 18, 19]. According to Moltrecht et al., the COVID-19 pandemic has had a significant impact on young parents, especially in terms of their mental health and parenting, resulting in many parents experiencing feelings of isolation, helplessness, and being overwhelmed [8]. The women included our study felt a *sense of loss*, and therefore living their motherhood and this period of restricted movement and isolation transformed their experience of pregnancy in ways they would have not imagined. While women expected an increase in significant social interactions related to their pregnancy, the absence of the usual social interactions and support systems led to a sense of loneliness. Furthermore, women also expressed concerns about contagion risks and potential consequences for their babies, as well as uncertainties surrounding maternity care during the health emergency, as described by other authors [11].

In the FGs, fathers expressed feelings of helplessness and anxiety for their partner's well-being during labor and delivery, and for their exclusion from obstetric check-ups, ultrasounds, prenatal diagnosis. This lack

Table 3 Provision of care of Healthcare Services: weaknesses and strengths

Weaknesses

Delays in disseminating information on available services
Peer breastfeeding support mother: "I perceived that the communication between the CHSF and the families was not sufficiently swift, resulting in families being unaware of ongoing developments."
Delays in the provision of some healthcare services
Pregnant woman : "I have to say that, for example, things like… the glucose tolerance test, I didn't do it in time, because it fell right in the peak weeks."
HCP: "A gynaecologist refused to see a woman because she worked at the main hospital. He insisted on waiting 7 h for her COVID test result before conducting an admission examination. He wanted to put her in a COVID ward and make her wait 7 h just to conduct an examination. If he wasn't sure she was negative, he had no intention to see her. The woman had no symptoms or issues; the only risk factor was that she worked in a hospital."
Ineffective or poor communication across different healthcare services
Peer breastfeeding support mother: "In the sense that… the hospital has been proceeding along its own care pathway, implementing its protocols, changing them a thousand times, and continually altering them. District midwives don't know what will happen. For instance, they have now started conducting COVID-19 tests on all mothers in the last weeks of pregnancy, but no one had communicated this to the district midwives, to give an example. (…) In my opinion… there needs to be better coordination between the community health services and the hospital, especially in a situation of emergency like this."
Uncertainty among HCPs about what to communicate to women and informal caregivers
HCP: "Regarding the relationship and reassurances [to the users of healthcare services], I felt the need to find a reference point, a stable anchor that could provide guidance. Unfortunately, I found myself, along with us healthcare workers, within this whirlwind of instructions and lack of instructions. Initially, we started wearing masks, but there wasn't a directive for us to wear masks. It was a decision made by us healthcare workers, right? So, there was no clear direction at that moment
Exclusion of the fathers
Father: "The negative part, yes, was the childbirth situation because my partner went into the hospital and I didn't have any news from her for 12 h, so I was there outside the hospital, digging a trench around the hospital, spinning like a hamster in a wheel!"
Rise in voluntary hospital discharge following childbirth
HCP: "…they had the idea that they were less protected in the hospital, and since there was still staff rotation, the idea was: "I give birth, I sign for self-discharge after 2 h, 12 h, it doesn't matter. I'm going home. I feel safer at home with my husband and my baby, and no one else is coming." However, they still felt somewhat unsafe in the hospital compared to the three shifts whereby personnel changes every two days. You see, six or seven shifts, and so they preferred to go home."
Difficulties of HCPs in complying with restrictions on parental presence and physical distancing
HCP: "In this role as a healthcare professional, I felt like a technician, stripped of the human relationship aspect, as well as the professional dimension required."
HCP: "It was a tragedy in the neonatal intensive care unit, as Kangaroo Care, which is a powerful means of establishing relationships and promoting neurocognitive development, was halted. We couldn't make the upper management understand that it was not just a visit from the mother, but rather therapy, a crucial aspect of relationship-building and neurocognitive development."
HCP: "I accompanied a girl through the end of her life, and I was given a bit of a disapproving look [by colleagues] when I hugged the family, because I was supposed to maintain a one-metre distance. Have we gone crazy?"
HCP: "A certain group of mothers who I found terribly abandoned, were the ones who underwent pregnancy termination. Okay, damn it, I mean, those mothers needed a different approach; the partner had to be there in those situations. Those mothers were completely forgotten, right? And I say it, it hurts my heart too. Why? Because in pregnancy termination, they were left alone with their decision. We must not forget this if Covid happens again. These women need a pass: the partner or a support person of women's choice must be there anyway, we could test them[for Covid-19] in every possible way, we can put on all the masks in the world, but that husband, partner, friend must be there. We can't leave them alone."
Limited support and protection from top management
HCP "We realized that we struggled with the same battle, but in the end, if we all came out of it, it's because we were united among ourselves, because from the top we didn't get much response or even much help, it seems to me"
HCP: "The real danger became apparent much later. As a healthcare worker, I felt unprotected [by the healthcare management], *and behind me, there's a family – children, parents."*
Disparities and limitations in the use of digital devices
Pregnant woman: "It's not a given that everyone has the same tools at their disposal. Objectively, during this Covid period, without internet connectivity, I would have felt completely lost because I was very much alone during the weekdays. So, it helped me stay in touch both with other mothers and family members…"
Pregnant woman "(Online AGMs) It is a valid alternative, absolutely […], but it is an alternative. In my opinion, social relationship, physical contact, is fundamental … "
Mother: "Yes, in my opinion, there's also a bit of a lack of practical aspects [in online AGMs], I mean… they sent us the position sheets, but we never tried them all together. And they told us about vocalisations, but we didn't do them… there's a bit of a lack in terms of… practice"

Strengths

Close and timely provision of care
Pregnant women: The CHSF has been crucial in maintaining continuous contact and providing a point of reference. I was pleasantly surprised to learn that even in the first phase of the pandemic, in case of emergencies, it was still possible to schedule in-person visits and have the staff come to your home
Availability, sense of being taken care of by CHSF midwives
Mother: "I would say that it hasn't changed compared to before the COVID pandemic, in the sense that when I faced a difficulty, I wrote to the CHSF midwife, and the next day I was there, and they helped me a lot, giving me all the advice, the right treatments, and so on. And from the perspective of one-on-one services, it has remained the same
Sustaining communication and relationships through digital technology
Mother: "There have been ways to contact, for specific cases, through which one could still receive prescriptions, recommendations, and guidance remotely. This, in my opinion, is significant for a mother or someone engaged in work."
HCP: "The day they decided to close [lockdown], I and the colleagues on duty immediately tried to set up a Skype channel to at least allow, with the help of the psychologists, moms and dads to call and see their children [in the NICU]."
Father: "Even with the difficulty of not being able to meet in person, we still managed to fulfill all the bureaucratic requirements, and in a very straightforward manner."
Timely support from peer breastfeeding support mother associations to mothers and families, particularly when health institutions faced difficulties
Peer breastfeeding support mother: "I believe it was crucial that the entire network mobilized not just the healthcare network, but primarily… Perhaps we, the mothers, started this first in Trieste. We began finding these online meetings, and gradually, because we were freer from protocols, privacy concerns, and many other things, right? So, we promptly provided a response to this."

of involvement was coupled with feelings of guilt for not being able to support their partner as they would have wished. Several studies have reported that partner exclusion during pandemic generates stress in women during pregnancy and childbirth, leaving them without family support for childcare [39–41]. Fathers also felt a sense of deprivation, missing out on crucial moments and bonding opportunities with their child, with the fear they would not be recognized by their baby, especially when hospital access was restricted [42, 43]. Moreover,

the probability of separation from their newborns compounded these concerns in the fathers involved in our study, echoing the importance of fathers' participation during childbirth and the immediate postpartum period. The importance of partner involvement for a positive early father-baby attachment and for an overall family development is well documented in the literature [39, 42, 44–46].

The HCPs also described that the restrictions on partner access to hospitals had a negative impact, as women felt alone and suffered the absence of their partners during the initial days with their newborns. They also reported that loneliness and lack of partner support during hospitalization in some mothers affected their choices regarding the type of feeding for their children, confirming the importance of the partner's presence during that stage [47]. Another study has shown how separation from partners affects the mother-baby dyad and the mother-baby-partner triad. In Bartrick et al., the mothers that had been separated reported feeling "very upset or distressed", and, despite their efforts, almost one-third (29%) of the mothers who had been separated from their newborns were unable to resume breastfeeding after reuniting [48]. In our study, some of the social distancing measures were described to be inconsistent, for example partners with negative swab had to wait in the hospital car park ("*spinning like a hamster*"). A restrictive interpretation of the precautionary principle has led to the exclusion of fathers/partners from their caregiving role during childbirth and the post-partum period [49]. Fathers/partners and visitors were placed on the same level in terms of restrictions. In fact, the Italian COVID surveillance system reported that only 51.9% of the women had a support person during childbirth [50]. Additionally, Zambri et al. [49], in a recent study, reported how, a year after the first pandemic wave and despite national guidance [51], the presence of fathers/partners never returned to the pre-pandemic levels, although highly recommended by WHO [52] and recognized as a human right [53]. Furthermore, significant inequalities in the quality of maternal and newborn care were reported in the literature, particularly between the northern and southern regions, causing preventable systemic inequities and exacerbating pre-existing ones [54, 55].

Communication across different healthcare services in our results was described as a notable weakness. In fact, HCPs reported that, due to the ever-changing daily instructions and conflicting information, communication with women and caregivers was a significant challenge. In the first months of the pandemic emergency, the recommendations were conflicting. While some agencies recommended the presence of the woman's partner/father, skin-to skin contact, breastfeeding and rooming-in, [51, 56] others questioned their safety [57]. In Italy, a multidisciplinary group coordinated by the Italian National Institute of Health from 27th February 2020 started providing a weekly online synthesis with frequent updates, based on emerging evidence, to healthcare management and personnel involved in the birthing process [58–60]. In May 2020, the national guidance "*COVID-19 and pregnancy, childbirth, and breastfeeding: the interim guidance of the Italian National Institute of Health*" was released and updated in February 2021 [51]. However, the dissemination of updated evidence at the national level did not always lead to clear and consistent communication provide to health professionals and that given by health professionals.

Our study highlighted several positive responses by HCPs to adapt to pandemic challenges, the introduction of online consultations, continued access for fathers after childbirth in some facilities, and breastfeeding support. The community services in Trieste quickly adopted a hybrid care model. These responses were crucial, despite the lack of preparedness and IT infrastructure. This reaffirms the effectiveness of the Baby-Friendly Community [26, 27] in ensuring appropriate standards, including the non-violation of the International Code of Marketing of Breast Milk Substitutes [61, 62], even in emergency situations [63]. Some telehealth services were active in many contexts even before the pandemic (e.g., telelactation services offered by IBCLCs, La Leche League Leaders, and peer-support mother groups) [64–69], which highlighted the need and effectiveness of telemedicine in maternity care, prenatal care and breastfeeding [70–75]. Considering this, our findings showed that the support provided to couples by the CHSFs through AGMs and PGMs remotely was perceived as useful in reducing social isolation and sharing information and needs related to this period.

By exploring the needs and feelings of HCPs, we found that the pandemic had a significant impact on them, affecting both their personal and working lives. They experienced the fear of transmitting the virus to their families, struggled with childcare, and faced stress due to constantly changing guidelines and restrictions, including managing visitor limitations, as reported in other studies [76–78].

In our qualitative research, remote work, which became the norm during lockdown, presented an ambivalent opportunity. On one hand, the increased presence of fathers at home during pregnancy and the early postpartum period had a positive impact on family dynamics and fathers, and on children's well-being. The closure of businesses and remote working fostered greater family unity and allowed parents to manage their time according to the needs of their child and the new family.

While lockdown negatively impacted on social relationships, in this case it fostered a greater presence of the father, and the family in general, ensuring a greater adherence to the Nurturing Care Framework [29–31].

Strengths

The data from this and other studies published during lockdown provide unique and valuable insights that should now be considered by policymakers for future pandemic preparedness plans. These plans should include a consistent response to the needs of pregnant women, mothers, fathers/partners and babies.

Limitations

The main limitation of this study is that we adopted purposeful convenience sampling, by recruiting our participants through the healthcare services network. Thus, participation was affected by a selection bias related to the cultural level of the population accessing the CHSFs, which tends to be higher.

Conclusions

The concurrent existence of service organizations based on the concept of Primary Care, supporting comprehensive patient-focused care, and defined care pathways according to strong BFI standards, along with the rapid adoption of IT communication tools, has enabled flexibility and responsiveness in the community care system even in the early pandemic phase. This has maintained continuity of care, including support for mothers, fathers/partners, babies, and families, ensuring appropriate and timely care.

Trieste's Baby-Friendly Community, which was already functioning before the pandemic, including our study, has shown the value of a robust healthcare policy based on the promotion of health for mothers, fathers, and children through a model of care continuity and a network connecting the community with the hospital. Therefore, robust structures like the BFI have ensured the continuity of CHSF activities, remaining a point of reference for the health of women, mothers, fathers, children, families, and the community in general. This research highlights the multifaceted needs and feelings of different groups during the COVID-19 pandemic. So, it would be desirable to include in preparedness plans the needs of all those involved in the Birth Care Pathway, as well as the timely dissemination of information and digital tools.

Abbreviations

CHSF	Community Health Services for Families
FG	Focus group
HCP	Healthcare professional
NHS	National Health System
ASUGI	Azienda Sanitaria Universitaria Giuliano Isontina
AGM	Antenatal group meeting
PGM	Postnatal group meeting
ELC	Essential Levels of Care
BFI	Baby-Friendly Initiative

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12889-024-20941-8.

Additional file 1. Birth care Pathway of ASUGI. The standard provisions of care within the"Baby-Friendly Community Initiative" for the protection, promotion, and support of breastfeeding of the "*Azienda Sanitaria Universitaria Giuliano Isontina*" (ASUGI).

Additional file 2. Semi-structured interview questions. Objectives and question framework of focus group.

Additional file 3. The Checklist of COnsolidated criteria for REporting Qualitative research (COREQ).

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Authors' contributions

G.T., A.G., S.M., M.V.S., F.Z., F.M. made substantial contributions to the conception and design of the work; A.G., F.Z., F.M., G.T. conducted the FGs; G.T. collected the data; G.T., F.Z. and A.G. conducted the qualitative analysis and interpreted the qualitative data; G.T. drafted the paper; G.T., A.G., V.D.S., M.V.S. and F.Z. reviewed and edited the manuscript. All the authors have read and approved it.

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Data availability

Raw data from focus groups are not publicly available to preserve individuals' privacy under the European General Data Protection Regulation. The data and transcriptions presented in Table 1, Table 3 and the verbatim excerpts in the results section of the manuscript represent information collected from the study with the anonymization of sensitive data.

Declarations

Ethics approval and consent to participate

The study was submitted and approved by the Friuli Venezia Giulia Regional Ethics Committee (CEUR- prot. n. 16724 del 20.05.2020). This included the approval of the Data Protection Office and GDPR adherence of the online web app. Before the commencement of the FGs, participants were provided with the privacy information form and signed the informed consent.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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