



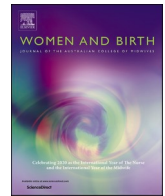
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Midwives' experiences of providing maternity care to women and families during the COVID-19 pandemic in Northern Italy

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ABSTRACT

Problem: The COVID-19 pandemic has significantly challenged maternity provision internationally. Rapid and radical changes were implemented, with midwives facing anxiety and moral distress if not able to provide optimal and woman-centred care in line with professional values.

Background: Healthcare professionals' stress and burnout are commonly reported during other global emergencies, which may eventually contribute to reduced quality of care. There is lack of evidence of the challenges faced by midwives in Italy during the COVID-19 pandemic.

Aim: To explore midwives' experiences of providing care to women and families during the COVID-19 pandemic. **Methods:** Qualitative interpretive phenomenological approach, using semi-structured interviews and thematic analysis. The sample included 15 midwives. Ethical approval was obtained.

Findings: Four themes were identified: 1) adjusting to the ever-evolving organisation of care; 2) physical, psychological and relational challenges; 3) support network; 4) deferred sense of awareness.

Discussion: Midwives faced professional and personal challenges during the pandemic, displaying feelings of fear, anxiety, uncertainty, discomfort, lack of support and knowledge with potential long-term effects. Adjusting to the continuous, rapid and drastic re-organisation of maternity services was particularly challenging. Factors facilitating a safe, supportive and empowering workplace included support from colleagues and managers, access to appropriate PPE, reliable guidelines, good communication and emotional support. Positive aspects of personal and professional development included communication skills, establishment of trusting relationships, sense of empowerment and teamwork.

Conclusion: In the context of a pandemic, optimisation of midwives' physical, emotional and psychological wellbeing should be considered. Timely and comprehensive guidelines and appropriate resources should be provided to assist midwives in facilitating family-centred respectful maternity care and preserving childbirth as a bio-psychosocial event.

1. Introduction

The World Health Organization [1] declared Coronavirus (COVID-19) to be a pandemic disease and global public health emergency on the 11th of March 2020. Rapid and radical changes in the organization of maternity care were therefore implemented worldwide in an attempt to control the spread of the virus. Protective measures put in place in the Italian maternity services during the first pandemic wave included minimising physical contact; remotely delivered appointments and antenatal classes; visiting restrictions; birth companions and skin-to-skin allowed only for COVID-19 negative women; screening tests

and personal protective equipment (PPE) [2–7].

Midwives have a distinctive role in providing care to women and families throughout the childbearing continuum; their support is even more significant in the context of mothers and partners' anxieties, distress, uncertainties, unmet expectations and worries exacerbated by the pandemic [8–13]. Midwives are equally facing added challenges, stress and anxiety in providing maternity care during the pandemic [14–19]. These may include adapting to rapidly changing guidelines and unfamiliar ways of working [19–21]; moral distress if not able to provide optimal and woman-centred care in line with professional values [19,21,22]; concerns on how to prepare women and families and

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manage their anxieties, including not being able to answer questions due to lack of information and evidence [18,19]; fears for personal and own family safety [19,23–25]. Health care professionals' stress, burnout and post-traumatic stress disorder are commonly reported in studies conducted during other major global emergencies [26–29], which may eventually contribute to reduced quality of care [30]. Research conducted amongst nurses in Italy highlighted the 'huge impact of COVID-19 on the Italian nursing workforce', especially in regard to the high risks associated with caring for COVID-19 patients, exacerbated by the shortage of appropriate PPE and the drastic decision of living separately from their families to avoid potential virus transmission [31]. However, there is lack of evidence of the challenges faced by midwives in Italy during the COVID-19 pandemic. The aim of this study was therefore to explore midwives' experiences of providing care to women and families during the first wave of the COVID-19 pandemic in Italy.

2. Methods

2.1. Research design

A qualitative study using an interpretive phenomenology approach (IPA) was undertaken to explore midwives' experiences of providing maternity care to women and families during the COVID-19 pandemic first wave. IPA was chosen as the preferred approach as it is participant-oriented, allowing midwives to freely express themselves and recount their lived experience stories. Furthermore, it gives researchers the opportunity to collect in depth and meaningful data [32].

2.2. Research setting

The research setting was a Northern Italy maternity hospital (MBBM Foundation at San Gerardo Hospital, Monza) in the Lombardy region, which was designated as a referral centre for COVID-19 positive women during the pandemic [2,3].

2.3. Sampling strategy, participants and recruitment

A purposive sampling strategy was adopted, with all midwives working on the research site's labour ward, antenatal/postnatal clinics and antenatal/postnatal wards during the first COVID-19 pandemic wave being eligible to take part in the study. The exclusion criteria were midwives not working in the clinical settings above or who worked in those areas outside the first pandemic wave timeframe. The recruitment process involved sending an email to all eligible midwives informing them of the study and potential involvement, with the researchers remaining available for clarifications, questions and further discussion about participation. Fifteen midwives were recruited to take part in the study.

2.4. Data collection

Data collection was undertaken in June 2020, using audio-recorded semi-structured interviews conducted by video-call ($n = 4$) or face-to-face ($n = 11$) depending on the midwives' preference. The individual interviews were conducted by two members of the research team (AN/SF). The interview topic guide was developed by the research team and an external expert panel of 2 midwives and 1 obstetrician practicing in hospital maternity settings during the first pandemic wave. Existing literature evidence on healthcare professionals' experiences during other global emergencies was also considered [26–29]. The topics explored included lived personal and professional experiences within the pandemic emergency, relationships with service users and re-organisation of maternity services and policies.

2.5. Data analysis

Interview recordings were anonymously transcribed verbatim followed by interpretive phenomenological thematic data analysis using NVivo software. All transcripts were read, re-read and coded by two members of the research team (AN/SF) in the first instance, to delineate units of meaning [33]. A second coding iteration was undertaken by AN/SF/SB, with units of meaning clustered to form themes and sub-themes. Relevant quotes were selected from a range of participants to support the themes/sub-themes identified and to highlight contradicting data. The final coding framework was reviewed and agreed by all authors.

2.6. Authors' background

Three of the authors have backgrounds in midwifery with higher education and research experience (SF/SB/AN) and two of them have an obstetric background with research experience (SO/PV). Although bracketing was not implemented, there was a conscious effort to maintain openness to data and avoid the influence of pre-existing personal/professional views. The midwives in the external panel contributed to the development of the interview topic guide.

2.7. Ethical considerations

Ethical approval was obtained prior to commencing the study. Information sheets were made available to potential participants following study advertisement. An informed consent was signed by all midwives prior to the interview. Participation was voluntary and midwives were free to decline or withdraw at any time. Audio recordings were stored securely and pseudonyms were used to anonymise scripts and disseminate findings. Due to the research topic being sensitive and having the potential of causing emotional discomfort, strategies were identified to prevent and limit participants' distress including sensitive and open questioning; creation of a comfortable interview environment; flexibility in interview timing and potential interruption of interview [34].

Table 1
Participants' demographic data.

Participant	Age	Midwifery work experience (years)	Educational level	Caring responsibility
M1	30	4	Bachelor degree	No
M2	50	32	Bachelor degree	Yes
M3	40	16	Master degree	Yes
M4	26	2	Master degree	Yes
M5	30	4	Master degree	No
M6	30	6	Bachelor degree	No
M7	27	3	Master degree	No
M8	35	11	Bachelor degree	Yes
M9	42	18	Bachelor degree	Yes
M10	25	2	Bachelor degree	No
M11	31	8	Bachelor degree	No
M12	54	31	Master degree	No
M13	39	15	Bachelor degree	Yes
M14	54	31	Bachelor degree	Yes
M15	39	14	Bachelor degree	Yes

3. Findings

The participants' background data are summarised in Table 1. The interviewees' work experience ranged from 2 to 32 years, including both junior and senior midwives. Eight midwives had caring responsibilities at the time of data collection. In tables, figures and quotes, participating midwives are referred to as M1, M2, M3 etc.

The findings include 4 main themes: 1) adjusting to the ever-evolving organisation of care; 2) physical, psychological and relational challenges; 3) support network; 4) deferred sense of awareness. Themes and sub-themes are reported in Table 2, including the number of participants and supporting quotes in which these are identified.

4. Theme 1: adjusting to the ever-evolving organisation of care

The midwives reported they had to adjust to a rapidly and continuously changing practice environment due to 'new' characteristics of service users, re-organisation of maternity services and care pathways characterised by a lack of core midwifery care.

4.1. 'New' service users

The midwives referred to providing care to new types of service users, including 'lonely' and 'terrified' (M11) women who could not benefit from the presence of a companion during labour and birth and in the postnatal period. The absence of a supportive person is referred to by midwives as one of the most critical factors they encountered when caring for childbearing women during the pandemic. The participants acknowledged that the women required extra midwifery support and presence. This was particularly noted in Covid-19 positive women who were unexpectedly transferred to the Covid-19 referral hospital from other maternity units. They also perceived the women's fear when seeing healthcare professionals fully wearing PPE. The midwives re-shaped the provision of care with new approaches adapting to the changed needs of service users, paying particular attention to facilitating the communication between the woman and the physically distant companion:

They felt this big fear of having to go through the three first days after birth on their own (M14)

Women got scared at first impact. I think when a midwife or a doctor enters in the room covered in PPE. it's pretty destabilising for the woman (M10)

Table 2
Themes and sub-themes.

Themes and sub-themes	N. of participants	N. of supporting quotes
THEME 1: ADJUSTING TO THE EVER-EVOLVING ORGANISATION OF CARE		
'New' service users	14	32
Re-organisation of maternity services	12	34
Compensating the lack of core midwifery care	15	52
THEME 2: PHYSICAL, PSYCHOLOGICAL AND RELATIONAL CHALLENGES		
Physical strain	15	56
Psychological struggle	14	50
Relational difficulties	15	63
THEME 3: SUPPORT NETWORK		
Team work, compassion and sharing	14	62
Family and friends' support	9	13
Empowered by childbearing women	11	21
THEME 4: DEFERRED SENSE OF AWARENESS		
The time of awareness	11	27
The images of awareness	6	7
Sharing experiences, feelings and challenges	12	35

We [midwives] were the only persons who could support the women (M6)

The midwives praised the women's significant resilience in an exceptionally stressful situation and defined them as 'heroic' (M5), 'strong' (M5) and 'admirable' (M15). They also felt women were understanding of the healthcare professionals' struggles and very appreciative of the care received.

Some midwives felt the 'exclusion' of the larger family and friends' network was a positive aspect for the woman and the newborn, giving them more space with no external intrusion. They also conveyed that the absence of relatives in the waiting room throughout the duration of labour caused less interruptions and improved the quality and efficiency of care provision:

Despite birth being a social event, the limited access to relatives has guaranteed a higher quality of healthcare professionals' work [...]. Sometimes too many relatives make our job more difficult (M8)

4.2. Re-organisation of maternity services

The pandemic emergency triggered a rapid and drastic re-organisation of maternity services, including the request to adhere to national lockdown restrictions; immediate suspension of annual leave; additional shifts; extra on-call availability; increased number of obstetricians and a dedicated midwife for Covid-19 positive women during each shift:

We realised we were in an emergency so they have suspended our annual leave and they informed us this was something that involved all of us (M12)

On the maternity ward we were lacking staff, so that meant skipping rest days and additional shifts (M3)

A significant challenge of the re-organisation of maternity services was the rapid, unclear, contradictory and continuously changing nature of information, protocols and guidance, particularly in regard to the identification and treatment of Covid-19 positive cases and the safety and protection of healthcare professionals in the workplace. The midwives were updated daily via several emails and text messages with multiple information often contradicting previous guidance:

From the communication of lockdown, there have been lots of continuous changes and news within a few hours' time span (M1)

In the morning you received an email saying what you should do, in the afternoon you received a contradicting one reversing what was previously said (M2)

The midwives reacted to the infodemic by continuously re-adjusting and re-shaping the organisation of care with a large sense of responsibility and shared decision-making. Within their multidisciplinary teams, they implemented new strategies and solutions to improve the quality of work and reduce the staff's physical and psychological efforts, whilst maintaining and guaranteeing the quality of care provided to women and families:

At the start of the shift, we decided together what to do and took turns. Being able to agree it between us was helpful (M6)

We tried to protect the most vulnerable colleagues on each shift (M9)

As the days went by and they were provided with more comprehensive guidance, the midwives felt more confident and adapted to the 'new' environment, learning how to control stress and fear:

We became more confident, even if there was a Covid case we weren't as afraid as before, we knew how to use the PPE and what to

do after a while, it became easier. Once everything was clear, I adapted better to the situation (M11)

4.3. Compensating for the lack of core midwifery care

The midwives tried to put in place strategies to compensate for the unprecedented lack of core midwifery care as a result of the establishment of pandemic restrictions, due to social distancing, use of PPE and absence of the birth companion. These were considered barriers to the midwife-woman relationship and the overall care provided, with particular impact on the physical contact and support during labour and birth; the midwives found it very hard to accept and comply with the mandated restrictions:

Caring for women whilst showing only your eyes, these women were terrified [...] we were not used to this distance (M11)

I missed the physical contact [...] you can have physical contact with the gloves, but it was totally different from the everyday pre-pandemic physical contact (M6)

Midwifery care is not compatible with social distancing (M1)

The new strategies adopted by the midwives included making full use of the few communication means available, such as the verbal communication, eye contact and use of hands (despite wearing PPE). The participants described some positive aspects of the new ways of providing care. For example, not being able to physically 'interfere' with the woman-baby relationship during breastfeeding, increased the midwives' observational skills and ability to guide the woman verbally:

I tried... with the eye contact, the only way of communication that was not hidden. I also talked to the woman saying 'look I'm here, don't worry' but it was very difficult (M11)

On your hands you had three pairs of gloves and even if you couldn't feel the skin to skin contact you tried to use the hands in the best way. It was more difficult to feel the hot and cold so you had to ask to the woman (M13).

I had only the bed, I had no birthing ball and nothing else to make the birth feel as non-medicalised as possible. I tried to use my hands as best as I could (M13).

The use of technology supported the midwives in compensating for the birth partners' physical absence. The participants encouraged the use of video-calls and the recording of the foetal heartbeat to allow the virtual involvement of the woman's family, facilitating birth as a social and shared event. One midwife opened the labour ward door to allow the woman and her partner to see each other, although at a distance (M3):

We video-called the family with the woman [...] we tried to involve the family too (M5)

If the husband was outside in the car park I used to say 'you can call your husband, let him know you're starting to push' (M2)

Some women recorded the foetal heartbeat so that dads could listen to it too (M8)

5. Theme 2: physical, psychological and relational challenges

The midwives described their experience of the Covid-19 pandemic as significantly marked by physical, psychological and relational challenges in the work and family environments.

5.1. Physical strain

The midwives recognised the significant physical efforts of caring for Covid-19 positive women due to drastic changes in care provision. The

increased number of shifts or being on call was not seen as a major cause of stress. They reported the most significant struggle was being on duty non-stop for twelve hours in restricted, non-ventilated and isolated rooms, without being able to take a break, drink, go to the toilet or wipe their face. Wearing intolerable and painful PPE for a prolonged period of time made the situation even more strenuous, with some midwives feeling 'oxygen deprived' (M13):

Some colleagues were wearing PPE in a locked room for 12 h, with no windows and no toilet, without drinking, without eating (M10)

It was very hard to tolerate these very uncomfortable PPE which we were not used to. After 2 h wearing a FFP3 mask it felt like your ears were coming off your head, but you had to keep it on so we carried on for hours in pain. The goggles on top of the mask band hurt like hell (M11)

5.2. Psychological struggle

The participants acknowledged a significant psychological struggle resulting from continuous changes in organisational and clinical procedures imposed by a constant re-organisation of maternity services and pathways. The simplest routine care practices became extremely complex procedures, requiring more time and higher levels of concentration whilst generating feelings of apprehension and anxiety. The midwives' psychological strain originated also from the uncertain, uncontrollable, ever-changing and risky nature of the working environment during the pandemic, for which they felt extremely unprepared. The initial pandemic chaos and infodemic required an extra mental effort in re-organising work practices, spaces and resources (often unavailable) to comply with new guidance. Especially in the first couple of weeks of the pandemic, the midwives felt discouraged and anxious about using unreliable checklists to recognise positive cases quickly and activating undefined care pathways. Not knowing when the pandemic would resolve was an added stressor:

At the start [of the pandemic] the panic prevailed. 'Is this really happening?' We didn't even have proper PPE to care for a Covid-19 positive woman, it was exhausting (M3)

Initially we felt lost, there were very few clear rules. There was a lot of confusion, we were absolutely not ready, we were all in the dark (M9)

I had to go to work in a place where I risked my life without an alternative option. There was a lot of incorrect or conflicting information, this triggered us to go haywire (M12)

The midwives expressed their difficulties in agreeing with and implementing unclear and unreasonable policies when these required a substantial modification of core midwifery care, which had a negative impact on the quality of care and families' childbearing experiences. Examples of these were related to not allowing the birth companion's presence and skin to skin contact after birth. One midwife described how hard it was to separate mother and baby following the neonate's Covid positive result:

It's been very hard to cut out the partners. It's been really hard to say 'your husband cannot come in the labour ward with you'. Communicating to dads that they couldn't see their baby has been incredibly hard (M2)

I had to take the baby away from his mum and it's been like stealing something from her hands. I wasn't prepared for this and it was tragic (M5)

The introduction of a Covid-19 testing and screening programme to all women accessing the maternity unit and the consequent allocation to dedicated care pathways were perceived by the midwives as reassuring

elements reducing uncertainty and stress. The same advantage was recognised in regard to the regular testing service offered to healthcare professionals, which allowed the midwives to monitor their Covid-19 status, reinforced the benefits of using PPE and eased worries in regard to interactions with people outside the work environment:

At some point we started to test all women. The checklist was very detailed and I felt reassured by this. Very few healthcare professionals tested positive so I felt safe using PPE appropriately (M14)

5.3. Relational difficulties

The midwives reported relational difficulties with both service users and the multidisciplinary team during the pandemic. Distancing rules, limited physical contact and PPE use were perceived as barriers to non-verbal communication, which is a key element when establishing a trusting relationship with the woman and her family:

The mask created a distance between me and the woman... there was a missing piece of communication. I could only use my eyes, that was it! Holding babies with gloves, it was hard (M7)

It's difficult. As midwives we establish a relationship with women through eye contact, physical contact, smiles and the PPE were like a wall (M15)

Some midwives referred to relational difficulties with other members of the multidisciplinary team, mainly due to the overall high level of stress whilst managing and coping with the pandemic emergency in the maternity unit:

We've had difficulties with some anaesthetists who were also under pressure and were very stressed, but we've always tried to limit these situations (M3)

Being a midwife during the pandemic strongly impacted on family relationships. The midwives acknowledged their increased exposure to the virus and implemented strategies to decrease the risk of infecting loved ones. These included using face masks at home; frequent hand washing; showering and changing clothes prior to hugging children; creating dedicated spaces in the family home (e.g. one bedroom and one bathroom used by the midwife only); the partner and children or the midwife moving out of the family home (e.g. to second homes). Although it was an intentional decision, the participants reported their struggle and sadness when isolating for a long period of time from family and friends:

One of the hardest things was the fear of taking the virus at home, despite being super-protected by PPE (M6)

I decided to live somewhere else and not with my parents to protect them (M7)

I was afraid of going back home. Shoes outside the door, shower straight away, I didn't hug the kids after work (M8)

I've seen my family for the first time after three months. It's been emotionally challenging (M1)

Some midwives tried to also protect their family from the psychological stress of the pandemic, by not sharing their actual experiences in the workplace and pretending that they had an 'ordinary' shift with no struggles, in order to maintain a relaxed and calm home environment:

I used to go home and pretend all went well, to not let my husband and son know the hard time I had at work. So this was an additional strain (M9)

6. Theme 3: support network

6.1. Team work, compassion and sharing

The midwives felt that the struggles of working in a hospital during the pandemic were a shared experience with the multidisciplinary team. Despite the stressful situation, the relationship with the team was perceived as the primary source of support, within an overall co-operative and supportive environment. The participants referred to the midwifery team as a strong, resilient, cohesive and tight-knit group. Sharing the pandemic experience as healthcare professionals led to the establishment of very intense, sympathetic and compassionate human relationships, allowing a safe space for sharing emotions, feelings and difficulties. Meeting colleagues in the workplace helped the midwives to feel less lonely, especially if they moved out of the family home during the pandemic:

The greatest support came from my colleagues. Working in a good environment and having a good relationship with all my colleagues. We were compassionate towards each other (M4)

There has been an incredible cohesion between us [colleagues] and there was a real willingness to personally commit and help [...] this really touched me (M12)

6.2. Family and friends' support

The midwives also received important support from their network of family and friends, where they found an opportunity to relax and distract themselves from the stress of the work environment. Communications with family and friends often happened virtually, by using video-calls. People's solidarity and caring attitude towards them as healthcare professionals gave strength to the midwives to withstand pressures and strains. Some midwives found it helpful to share their worries and struggles with friends who were also healthcare professionals working in a hospital environment:

Doing an evening video-call after the shift with your friends released the tension a little bit (M10)

My family, my husband gave me the strength to go every day to work. It was key for me having support at home, where I could switch off and think about something else (M6)

Sharing with friends the same experience. They worked in a different ward but they knew what was going on in the hospital. This has supported me a lot (M7)

6.3. Empowered by childbearing women

The participants reported that they felt empowered by childbearing women and recognised the facilitation of a positive birth experience as their ultimate goal. The duty of care and the perception of being the only source of emotional support for the labouring woman empowered and stimulated the midwives to dedicate more time in establishing a trusting relationship with the woman. Acknowledging that their presence made a significant difference to women was considered as one of the most rewarding aspects, supporting the midwives' strains and pressures when providing care:

I could see that the support we were providing as midwives was making the difference to women. Despite being exhausted, it was rewarding for them and for me at the end of the shift. (M6)

The midwives described the establishment of profound, intense and strong relationships with service users, with whom they shared time, difficulties, fears and loneliness. The midwives felt that the relationships

established with childbearing women during the pandemic empowered them to reflect on their practice and grow personally and professionally:

We have regained an increased level of relationship and partnership [...] like we [midwife and woman] were a team (M7)

All the women I have cared for have made me a better person, not only a better midwife [...] this has changed me profoundly (M3)

7. Theme 4: deferred sense of awareness

7.1. The time of awareness

The chaos and confusion induced by the infodemic caused a general sense of alarm initially, often interpreted as extreme and unfounded. The midwives reported they initially felt incredulous and sceptical towards the pandemic, considered as 'something distant with no direct impact on them' (M8). The rapid increase of infections and receiving information from healthcare professionals directly involved in the emergency management, made them realise the gravity of the situation:

We underestimated the situation, we were wearing masks but we thought it was an exaggeration to ask us to do so (M10)

I'd have never expected it to be like this, both on healthcare and personal levels (M10)

7.2. The images of awareness

The midwives recounted the images that increased their awareness of the pandemic emergency, including 'surreal' (M13), 'desert' (M14) and 'deafeningly silent' (M13) streets when travelling to/from work. They used the metaphor 'ghost cities' (M13) and they felt as if they were 'at war' (M14). Within the workplace, the participants referred to the empty midwifery triage, usually crowded with women, birth partners and families. They also described the over-crowded and transformed wards, incessant activities, lights constantly on and ambulances queuing outside the hospital. These were all considered as tangible signs of a new and unprecedented emergency situation:

Seeing the triage area being empty... (M14)The labour unit faces the emergency unit and we used to see the ambulances queuing to get in (M1)

The reinstatement of pre-pandemic environments was an opportunity for midwives to reconsider the strains, difficulties and challenges posed by the sanitary emergency:

It [reinstatement of pre-pandemic environment] was like sorting out your home after a big mess. Not with melancholy [...] I thought 'how cool we've been to stand up to and get through this mess' (M5)

7.3. Sharing experiences, feelings and challenges

The midwives acknowledged the benefits of sharing experiences, feelings and challenges after the pandemic, when the pressure of the emergency left space for reflection and reconsideration of events. They perceived the value of 'rationalising the lived experience' and 'putting the plugs in order' (M14). Although recounting experiences evoked strong emotions, with broken voices and silent pauses during the interviews, the midwives found very helpful sharing their thoughts and perspectives with the researchers:

It seemed like at some point the time stopped, and you don't even question your feelings in that situation, it's when you relax that they [feelings] start to come out (M1)

Even now, processing the situation by answering questions... things that were still hidden in the unconscious, now can come out (M10)

These are things I will process with time, but talking about it helps to rationalise feelings and emotions that has been hard to share (M11)

I would like to thank you cause I've put all the images together and I have re-lived these months. I felt free to share during this interview (M9).

8. Discussion

This work explored midwives' experiences of providing maternity care to women and families during the first wave of the COVID-19 pandemic in Northern Italy. Strengths of the study included the novelty of the topic within an Italian setting and the rigorous research process followed. Recruitment from one research site is a weakness of the study. However, the transferability and applicability of findings is strengthened by data being collected from midwives with a range of characteristics including age, work experience, educational level and caring responsibilities.

The findings highlighted the midwives' physical strain, psychological struggle and relational difficulties when caring for childbearing women within the pandemic, especially during assistance to COVID-19 women. Recent research [19,35] reported that midwives had to deal with professional and personal challenges during the pandemic, displaying feelings of fear, anxiety, uncertainty, discomfort, lack of support and knowledge. Wilson and Ravaldi [18] debated that 'managing an infectious disease outbreak is an unusual event for maternity providers' and midwives may feel out of their 'comfort-zone' due to working outside the usual scope of practice within irregular shifts and long hours.

The midwives found adjusting to the continuous, rapid and drastic re-organisation of maternity services, mostly based on the limited evidence available at that moment, particularly challenging. This is confirmed by Stulz et al. [36] and Bradfield et al. [19], who stated that the COVID-19 pandemic was a rapidly evolving situation resulting in midwives being disoriented and confused by the constantly adaptation to new policies and management decisions, in addition to resource limitations and the need to reassure service users during uncertain times [18].

Despite the measures taken during the COVID-19 pandemic, which compromised standards of care and disrupted the provision of maternity care worldwide [37,38], the interviewed midwives identified that some aspects of their practice were enhanced. This included communication skills, the establishment of trusting relationships, a sense of empowerment and teamwork. The development of these competencies and skills during the pandemic contributed to the midwives' personal and professional growth, with potential impact on quality and respectful maternity care, preserving childbirth as a biopsychosocial event [39].

The participants valued their support networks, including teamwork, compassion and shared decision-making in the workplace, family and friends' support and the empowerment coming from childbearing women. Factors facilitating a safe, supportive and empowering workplace include support from colleagues and managers, access to appropriate PPE, good communication, emotional support and stress management [35].

Although the interviewed midwives found it helpful to access peer support in the workplace and share their experiences with the researchers of the present study, they did not receive any dedicated and structured wellbeing support during the pandemic. This might have led to more negative feelings being reported during the interview since this was the first time the midwives were allowed to share and recount their experiences. Recent evidence endorses that high psychological effects, significant levels of stress, burnout and post-traumatic stress disorder are common in healthcare professionals and midwives' responses to pandemics, with potential long-term effects [40–42]. The

implementation of an ad-hoc psychological wellbeing service for midwives is proposed by Leone et al. [41]. Hunter et al. [25] recommended that midwives should be offered time to discuss and process experiences both as a group and individuals, including implications for the future.

Asefa et al. [43,44] states it is crucial to work towards strengthening health systems that are capable of promptly responding to shocks and upholding quality of care in times of public health crisis such as the COVID-19 pandemic. Maternity services should be prepared to face a pandemic emergency by providing the necessary resources for a safe and supportive working environment. Critical elements identified by the study findings suggest the following elements of good practice that should be adopted to support midwives providing maternity care within a pandemic context:

- optimise midwives' wellbeing by ensuring access to appropriate PPE, adequate working hours and regular breaks;
- support and follow-up midwives' emotional and psychological wellbeing, giving the opportunity to share and recount experiences, uncertainties and concerns (both in group and individually) in regard to personal and professional challenges they may face;
- midwives and their families' personal circumstances and potential vulnerability should be acknowledged;
- provide midwives and other healthcare professionals with shared and clear guidance, particularly in case of drastic re-organisation of maternity services;
- provide midwives with resources and preparation for the implementation of tele-health services to ensure inclusion of birth companions when not able to attend in person.

These recommendations provide maternity services with suggestions to support a positive and safe working environment for midwives caring for childbearing women in the context of a pandemic.

9. Conclusions

The findings of this study report midwives' professional and personal challenges during the pandemic, including feelings of fear, anxiety, uncertainty, discomfort, lack of support and knowledge whilst adjusting to the ever-evolving re-organisation of maternity services. In the context of a pandemic, optimisation of midwives' physical, emotional and psychological wellbeing should be considered. Timely and comprehensive guidelines and appropriate resources should be provided to assist midwives in facilitating family-centred respectful maternity care and preserving childbirth as a bio-psychosocial event. Areas of practice enhanced during the pandemic included communication skills, establishment of trusting relationships, sense of empowerment and teamwork; midwives are encouraged to maintain these competencies and skills. Future recommendations for research include exploration of the short, medium and longer-term psychosocial effects of the pandemic on midwives, investigated through mixed methods, and the evaluation of services to support their emotional and psychological wellbeing.

Statement of significance

Problem or issue: The COVID-19 pandemic has significantly challenged maternity provision internationally. Rapid and radical changes were implemented, with midwives facing anxiety and moral distress if not able to provide optimal and woman-centred care in line with professional values. **What is already known:** Healthcare professionals' stress and burnout are commonly reported during other global emergencies, which may eventually contribute to reduced quality of care. However, there is lack of evidence of the challenges faced by midwives in Italy during the COVID-19 pandemic. **What this paper adds:** Key elements of good practice that should be adopted across maternity care services to support midwives providing maternity care within a pandemic context were identified. Optimisation of physical, emotional

and psychological wellbeing should be considered. Timely and comprehensive guidelines and appropriate resources should be provided to assist midwives in facilitating family-centred respectful maternity care and preserving childbirth as a bio-psychosocial event.

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Author contributions

SF, SO, SB, PV and AN contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

Ethical statement

Ethical approval was obtained from the research site's Ethics Committee prior to commencing the study.

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Conflict of interest

None declared.

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