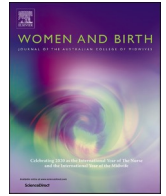




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# ‘We are going into battle without appropriate armour’: A qualitative study of Indonesian midwives’ experiences in providing maternity care during the COVID-19 pandemic

Alya Hazfiarini<sup>a,\*</sup>, Shahinoor Akter<sup>a</sup>, Caroline S.E. Homer<sup>b</sup>, Rana Islamiah Zahroh<sup>a</sup>, Meghan A. Bohren<sup>a</sup>

<sup>a</sup> Gender and Women’s Health Unit, Centre for Health Equity, School of Population and Global Health, University of Melbourne, Carlton, VIC, Australia

<sup>b</sup> Maternal, Child and Adolescent Health, Burnet Institute, Melbourne, VIC, Australia

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## ABSTRACT

**Background:** The COVID-19 pandemic has impacted the provision of maternity care worldwide. The continuation of maternity services during the pandemic is vital, but midwives have reported feeling overwhelmed in providing these services at this time. However, there are limited studies in Indonesia that have explored the experiences of midwives in providing care during the pandemic.

**Aim:** Our study aims to explore Indonesian midwives’ experiences in providing maternity care during the COVID-19 pandemic.

**Methods:** We used a descriptive qualitative approach using in-depth interviews to explore the experiences of 15 midwives working in different level of maternity care facilities in two regions in Indonesia, Surabaya and Mataram. All interviews were conducted via WhatsApp call and were audio-recorded with permission. Data were analysed using inductive thematic analysis.

**Findings:** Four themes were identified: 1) fear for the wellbeing of the family and herself, 2) increased workload, 3) motivation and support for midwives, and 4) challenges in providing maternity care for women.

**Discussion:** Sense of duty and loyalty to other midwives motivated midwives to continue working despite their fears and increased workload. Inadequate protection and support and practical challenges faced by midwives should be addressed to ensure midwives’ wellbeing and the continuity of maternity care.

**Conclusion:** Our study provides insight into Indonesian midwives’ experiences in providing maternity care during the COVID-19 pandemic. Adequate protection through PPE availability, effective training and support for midwives’ wellbeing is needed to support midwives in providing maternity care during the pandemic. Community’s adherence to COVID-19 protocols and good collaboration between primary health centres and hospitals would also benefit midwives.

## Statement of Significance

### Problem

Midwives are key providers of maternity services, but the provision of care has been challenging during the COVID-19 pandemic. There is little known of the experience of midwives, especially in low-to middle-income countries like Indonesia, where, as of September 2021, nearly 400 midwives are reported to have died

due to COVID-19.

### What is Already Known

Studies in other countries found that maternity care providers experienced increased workload, fears of getting infected and infecting other people, and inadequate Personal Protective Equipment (PPE) during the COVID-19 pandemic.

### What this Paper Adds

The findings of our study provide more insight into Indonesian

\* Corresponding author.

E-mail addresses: [a.hazfiarini@unimelb.edu.au](mailto:a.hazfiarini@unimelb.edu.au) (A. Hazfiarini), [shahinoor.akter@unimelb.edu.au](mailto:shahinoor.akter@unimelb.edu.au) (S. Akter), [caroline.homer@burnet.edu.au](mailto:caroline.homer@burnet.edu.au) (C.S.E. Homer), [rzahroh@student.unimelb.edu.au](mailto:rzahroh@student.unimelb.edu.au) (R.I. Zahroh), [meghan.bohren@unimelb.edu.au](mailto:meghan.bohren@unimelb.edu.au) (M.A. Bohren).

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midwives' experiences in providing maternity care during the COVID-19 pandemic and contribute to a better understanding of the provision of maternity care during the pandemic in Indonesia. Adequate protection through PPE availability, effective training and support for midwives' wellbeing is needed to support midwives to provide maternity care during the pandemic.

## 1. Introduction

The World Health Organization (WHO) declared coronavirus disease (COVID-19), a new respiratory infectious disease, as a global pandemic in March 2020 [1]. In Indonesia, the first confirmed case of COVID-19 was recorded on March 2, 2020 [2], and as of June 16, 2021, Indonesia had the second-highest number of COVID-19 confirmed cases (1,927,708 cases) in the South-East Asian Region [3]. On March 31, 2020, the Government of Indonesia declared COVID-19 as a public health emergency by issuing Presidential decree No. 11 of 2020 and imposed large-scale social restrictions (partial lockdown), requiring schools, offices, places of worship and public places to close to control viral transmission [4,5]. On July 10, 2020, the Government of Indonesia eased the restrictions by campaigning a transition to a 'new normal' called 'adaptation to new habits' [6]. Between July 2020 and July 2021, the government implemented short-term travel restrictions to ban people from taking annual exodus during Christmas 2020, New Year 2021 and Eid Fitr 2021 holidays [7,8].

Maintaining maternity care during the COVID-19 pandemic is critical for women and their babies. However, providing maternity care during these unprecedented times can be challenging. Globally, studies have documented maternity care providers' challenges in providing maternity care services during the pandemic. For instance, maternal care providers in Uganda reported that they were unable to reach their workplace due to travel restrictions [9]. In Pakistan, due to the implementation of a quarantine system and shortage of health workers, maternity care providers were reallocated to quarantine centres which meant they were unable to provide usual maternity care services [10]. Two global surveys reported increased workloads among maternity care providers due to staff infected with, or isolating after exposure to SARS-CoV-2 (the virus that causes COVID-19) [9,11]. Maternity care providers were also reported feeling worried about contracting SARS-CoV-2 and infecting other people, and the shortage of Personal Protective Equipment (PPE) increased their fears of the disease [9,12,13]. It is likely that these experiences have impacted the ability and willingness of maternity care providers to continue to care for women. The reduction in the number of available maternity care providers due to the COVID-19 pandemic is likely to exacerbate the existed shortage of maternity care providers [14,15]. The shortage of maternity care workforce due to the pandemic is likely to decrease maternity care coverage, and the impact of disrupted care coverage is estimated to lead to an increase of 12,190 to 56,700 maternal deaths over six months in low- and middle-income countries (LMICs) [16].

Understanding the experience of maternity care providers is crucial to ensure essential maternity care can continue to be provided during the pandemic. Despite the high case numbers of COVID-19 in Indonesia, there is no evidence about how Indonesian maternity care providers are providing maternity care during the pandemic. In Indonesia, midwives are the main providers of care throughout the maternity care continuum; their continued service is essential for women, but as of September 2021 nearly 400 midwives have died due to COVID-19 in the country [17]. The aim of this study was to explore the experiences of Indonesian midwives to hear their views on providing maternity care during the COVID-19 pandemic.

## 2. Methods

### 2.1. Qualitative approach and paradigm

Our study adopted a qualitative constructivist paradigm, with semi-structured in-depth interviews as a data collection method. The qualitative constructivist paradigm is beyond categorizing people's opinions or experiences as it focuses on subjective meanings and interpretations; thus, it allowed our study participants to articulate their experiences and allowed us to obtain in-depth information [18]. This study is reported according to the Standards for Reporting Qualitative Research (SRQR) [19]. The study was approved by the relevant human research ethics committees in Australia and Indonesia.

### 2.2. Study context and sites

In 2019, there were 210,268 midwives in Indonesia, with 72% employed at *puskesmas* (primary health centre at sub-district level), *poskesdes/poskeskel* (village health post) or *polindes* (village-level birth facility) [20]. Midwives serving at primary health centres also provide maternity care through the primary health centre's network, *puskesmas pembantu* (auxiliary *puskesmas*) and mobile *puskesmas*, while midwives working at the village-level provide maternity care at *posyandu* (integrated service posts) with assistance from community health workers (Fig. 1) [21].

We conducted this study in Surabaya and Mataram, Indonesia to enable our study in understanding the difference in the level of impact of the COVID-19 pandemic on the provision of maternity care (Fig. 2). Surabaya is the capital of East Java Province, with an estimated population of 3 million in 2020 [22], while Mataram is the capital of West Nusa Tenggara Province with an estimated population of 500,000 [23]. At the time of study planning in August 2020, East Java Province had the second-highest number of confirmed COVID-19 cases in Indonesia, with Surabaya district having the highest number of cases [2,24]. At the time, West Nusa Tenggara province had comparably fewer COVID-19 cases (12th of 34 provinces), with Mataram district having the highest number of cases [2,25].

### 2.3. Study participants, sampling and recruitment

Participants were eligible for inclusion if they were registered midwives, 18 years or older, providing maternity care at community maternity care facilities (primary health centre or village health post) in Surabaya or Mataram, had working experience as a midwife three or more years, and continued to deliver maternity care during the pandemic. A stratified purposive sampling method was used to select midwives who could represent different regions (Surabaya and Mataram) and level of maternity care facilities (primary health centre and village health post). Stratification was conducted based on the ratio of primary health centre and village health post availability in Surabaya

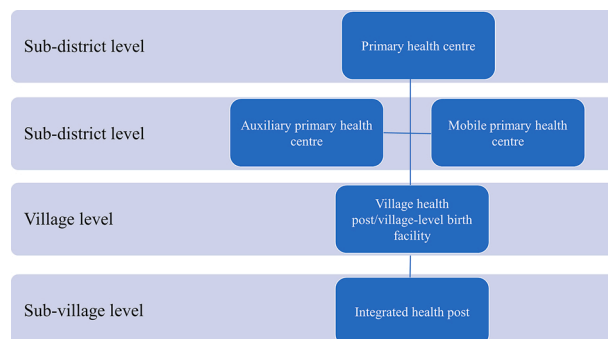


Fig. 1. Community maternity care services in Indonesia.



Fig. 2. Map of study sites created with R software.

and Mataram, approximately two to one [26,27] (see Fig. 3).

Midwives were recruited through social media and snowballing methods. Social media is used as midwives in Indonesia widely communicate and share information with one other through Facebook and WhatsApp. Social media is also able to mitigate time and distance barriers in recruiting participants [28]. An advertisement in *Bahasa Indonesia* was posted in WhatsApp groups of primary health centres in Surabaya and Mataram, with help from the primary researcher (AH) personal and professional contacts. The personal and professional contacts only helped distribute the advertisement on their primary health centres' WhatsApp groups and did not influence the potential research participants' decisions to participate in this study. The recruitment advertisement was also posted on public Facebook groups of the Indonesian Midwives Association. A snowballing method was also used to

access midwives working in different maternity care settings [29]. No further recruitment was conducted when data saturation was reached, when no new themes were identified from the data collection [30].

A total of 15 female midwives agreed to participate (see Table 1). Eight participants were midwives in Surabaya, while seven participants from Mataram. Three potential participants declined to participate due to the unavailability of time and difficulties in electronic signature for consent forms using Zoho [31], a secure application used to manage electronic signatures. None of the authors had any prior relationship with any of the participants before the study commenced.

#### 2.4. Data collection and management

Prior to data collection, the primary researcher conducted a one-to-one call for 8–10 min with potential participants to explain the study' objectives, potential risks, confidentiality and data collection process. Plain Language Statement (PLS) and consent form were sent to the potential participants via WhatsApp chat [32] after the initial call, and they were given 48 h to review. After 48 h, the primary researcher contacted the potential participants through WhatsApp chat to confirm participation and digitally sign the consent form using Zoho [31]. A link to sign the consent form was sent via email, and an instructional guide to sign the consent form was sent through WhatsApp chat.

All interviews were conducted by the primary researcher in *Bahasa Indonesia* using a WhatsApp call [32] between December 2020 and February 2021, and lasted between 45 and 60 min. The interviews were carried out using a semi-structured interview guide which was piloted before data collection with two midwives working in different region of

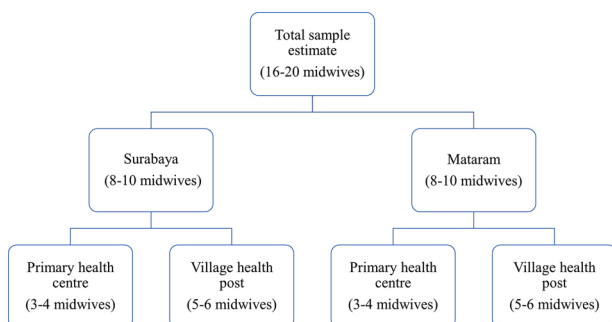


Fig. 3. Sampling frame.

**Table 1**  
Characteristics of participants.

Participants ID	Region	Pseudonyms <sup>b</sup>	Type of facility participant works <sup>a</sup>	Age (years)	Highest education level	Years of midwifery experience
Midwife 1	Surabaya	Indah	PHC	31–40	Diploma	10–20
Midwife 2	Mataram	Rani	VHP	31–40	Diploma	10–20
Midwife 3	Surabaya	Dina	VHP	31–40	Diploma	10–20
Midwife 4	Surabaya	Anisa	VHP	≥41	Diploma	10–20
Midwife 5	Surabaya	Wulan	PHC	20–30	Diploma	<10
Midwife 6	Mataram	Rizka	PHC	31–40	Diploma	10–20
Midwife 7	Surabaya	Kartika	VHP	≥41	Diploma	20–30
Midwife 8	Surabaya	Siti	PHC	≥41	Diploma	10–20
Midwife 9	Mataram	Ayu	PHC	≥41	Diploma	20–30
Midwife 10	Mataram	Intan	PHC	31–40	Diploma	10–20
Midwife 11	Mataram	Tuti	PHC	≥41	Diploma	20–30
Midwife 12	Surabaya	Nurul	PHC	31–40	Diploma	10–20
Midwife 13	Mataram	Putri	VHP	≥41	Diploma	20–30
Midwife 14	Surabaya	Dinda	VHP	31–40	Bachelor	10–20
Midwife 15	Mataram	Citra	VHP	31–40	Diploma	10–20

<sup>a</sup> PHC = Primary Health Centre; VHP = Village Health Post.

<sup>b</sup> All participants were female midwives.

study sites and no changes made to the interview guide after piloting the guide. The guide consisted of three broad sections: 1) how did midwives provide antenatal, childbirth and postnatal care **before** the COVID-19 pandemic? 2) how did midwives provide antenatal, childbirth, and postnatal care **during** the COVID-19 pandemic? and 3) what were midwives' experiences in providing maternity care during the pandemic? Interviews were conducted at a convenient time for participants, who confirmed that no one else was present at the beginning of the interviews. Participants received approximately AUD\$5 (50,000 rupiah) mobile credits after interview completion to compensate for their personal mobile data used to participate in the study. All interviews were audio-recorded and transcribed verbatim in Bahasa Indonesia by the primary researcher, with the fourth author reviewing a subset of transcriptions for accuracy and completeness. Participants were re-contacted through WhatsApp chat, if they provided ambiguous responses, to confirm their responses. Only quotations used in this paper were translated to English. All audio and written data were stored in password-protected cloud storage.

**2.5. Data analysis**

Data analysis was conducted concurrently as a data collection process. An inductive thematic analysis was used to analyse the interview transcripts in investigating themes within the data. Adhering to the suggested process of thematic analysis by Braun and Clarke [33], the primary researcher conducted a line-by-line coding of the interview transcripts first. The codes, then, were collated into potential themes. Once the potential themes were reviewed, they were grouped using a social-ecological framework to map the influences of midwives in providing maternity care during pandemic comprehensively by integrating their intrapersonal, interpersonal, community and socio-cultural contexts [34]. Identified codes and themes were discussed with the team and collapsed and expanded where necessary. The fourth author independently coded a sample of interview transcripts for reliability. At the same time as the team discussion, an initial writing of research report was conducted to support the analysis process. NVivo 12 [35], a qualitative data management software, was used to manage and review coded data and identified themes. Pseudonyms are used in direct quotations for midwives to protect participants confidentiality and humanise the findings.

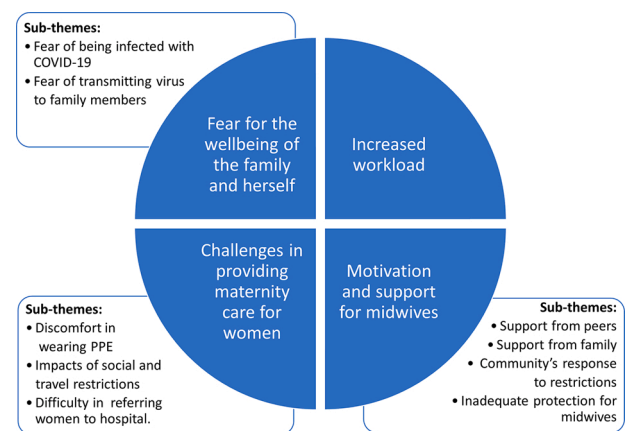
**3. Findings**

Four main themes were identified during analysis 1) fear for the wellbeing of the family and herself, 2) increased workloads, 3) motivation and support for midwives, and [4] challenges in providing maternity care for women. The four main themes included nine sub-themes,

which we have named factors influencing midwives in providing maternity care during the COVID-19 pandemic (see Fig. 4). The nine factors were 1) fear for the wellbeing of the family and herself, 2) support from peers, 3) increased workload, 4) inadequate protection, 5) difficulty in finding referral hospital, 6) support from family, 7) community's response to restrictions, 8) discomfort in wearing PPE, and 9) social and travel restrictions.

**3.1. Impact of COVID-19 on restructuring maternity care**

Through the interviews, midwives in both Mataram and Surabaya reported that maternity care was no longer provided either at integrated health posts (posyandu) or through home visits in the early days of the pandemic. Instead, the midwives were required to conduct phone consultations. At the time of data collection, social restrictions had been eased in Mataram, in which some integrated health posts were reopened, and midwives could provide care through home visits. In contrast, Surabaya's maternity care remained only available at primary health centre. Moreover, midwives reported that they were still mandated to reach monthly service coverage target during the pandemic, which was based on the projection of the number of childbearing women in their service area. Evaluation on the monthly service coverage target conducted by District Health officials did not take changes due to COVID-19, which midwives considered would affect their primary health centre ranking.



**Fig. 4.** Themes and sub-themes of experiences of midwives in Surabaya and Mataram, Indonesia in providing maternity care during the COVID-19 pandemic.



### 3.2. Fear for the wellbeing of the family and herself: fear of being infected

Participants from both regions discussed fears of being infected with COVID-19, especially during the early days of the pandemic. Working closely with people suspected of having COVID-19 and lack of knowledge of the COVID-19 contributed to this sense of fear. One midwife said:

“At first, I was really scared because we know nothing about the virus, the transmission.” (Ayu, Mataram, 20–30 years of work experience)

The death of colleagues or colleagues being infected with COVID-19 led to more anxiety. For example:

“I have lost two of my colleagues, so I feel trauma. When I found out they were infected with COVID-19, I was scared, very shocked because we were in very close contact. One of them was my village midwife; it is impossible for me to not be in direct contact with her.” (Kartika, Surabaya, 20–30 years of work experience)

Participants also feared about the safety of their families. They were worried that since they worked with suspected or confirmed people with COVID-19, they could transmit the virus to their family members at home. One participant explained:

“I am worried that I will bring the virus [COVID-19] to my family and the kids. That is my biggest fear. I am worried that my kids get infected.” (Intan, Mataram, 10–20 years of work experience)

Despite the concern for personal and family safety, participants continued providing maternity care during the pandemic. Some of them discussed their obligation to continue providing maternity care as explained here:

“It [providing maternity care] is a duty, and I must do it. It is a high-risk job...I can be infected with the virus, and I can get it from patients or other people. I do not have a choice other than keep working. Yes, I realise it is challenging.” (Indah, Surabaya, 10–20 years of work experience)

### 3.3. Increased workload: we are exhausted

All participants in Surabaya felt their workload during the COVID-19 pandemic increased. They were involved in the COVID-19 control and prevention team at their primary health centre, which required them to do contact tracing of people with COVID-19 and testing. One participant explained the extra work in this way:

“There is more work during the pandemic, although fewer people visit primary health centre. We must deliver antenatal care, help pregnant women to deliver their baby, provide childhood immunization...We also have to monitor confirmed COVID-19 cases, trace their close contacts, refer confirmed COVID-19 cases to a hospital or quarantine facility. Then, we also work as a swabber [COVID-19 tester].” (Wulan, Surabaya, <10 years of work experience)

Since COVID-19 started, the midwives' involvement in the COVID-19 team was an extra responsibility and required them to work outside of their working hours, for example:

“We have more workload [during the pandemic]. Even at home, I still have to work. I have to contact close contacts of the COVID-19 patients. If I can ask for something, I will not ask for anything other than asking for the pandemic to end as soon as possible. I think I am exhausted.” (Anisa, Surabaya, 10–20 years of work experience)

The extra responsibility also changed midwives' scope of practice as contact tracing was outside the usual scope of practice of a midwife. Due to working outside their usual scope of practice, midwives stated that they felt burned out during the pandemic. One midwife explained this extra burden here:

“We are exhausted, honestly. We provide care in the morning. Then, in the afternoon, we do contact tracing. After tracing, sometimes we have a shift for doing a swab test on the road in the evening. Very exhausting.” (Siti, Surabaya, 10–20 years of work experience)

Despite these new responsibilities in the COVID-19 team, the midwives were still expected to deliver maternity care to meet their monthly service coverage target. This was difficult as many women were reluctant to visit health facilities during the pandemic due to fears of COVID-19. One participant explained:

“We fail to meet our target since the number of visits to primary health centre has declined sharply. Women said they are afraid to visit primary health centre, especially since they are asked to wear a mask. They visit primary health centre when their belly is already big.” (Rizka, Mataram, 10–20 years of work experience)

In contrast, most participants in Mataram did not have additional work as they did not join the COVID-19 team. Only three out of seven participants in Mataram commented that they were involved in the COVID-19 team.

“Midwives are not involved [in COVID-19 team], so we focus on providing maternity care. [It is] because we have quite a lot of women accessing maternity care, so we are not included in tracing activity.” (Intan, Mataram, 10–20 years of work experience)

### 3.4. Motivation and support for midwives: “We are going into battle without appropriate armour”

Providing maternity care was challenging and stressful during the pandemic. Midwives realised that they should remain healthy to serve their community and that this also meant their colleagues would not be over-burdened by their absence if they are sick, for example:

“As front-line health workers, we are not allowed to be sick. If we are sick, we cannot provide healthcare, and our colleagues must bear the burden.” (Kartika, Surabaya, 20–30 years of work experience)

Midwives relied on each other to provide support at all levels, as one participant explained:

“We support each other in the office. When our colleagues were infected with COVID-19, we provided verbal motivation to them, so their conditions would not be getting worse.” (Indah, Surabaya, 10–20 years of work experience)

Some participants in Mataram also expressed the importance of collaboration among midwives to ensure their personal and communal safety. Due to a shortage of masks for PPE, midwives started producing masks and distributing the masks among themselves, for example:

“At the beginning of the pandemic, we always ran out of the mask. Midwives who are members of the Indonesian Midwives Association's committee in Mataram took the initiative to produce masks and distribute them to other midwives.” (Ayu, Mataram, 20–30 years of work experience)

In addition to peer support, participants from both regions mentioned receiving support from their family members to continue working during the pandemic. This participant explained:

“My family always support me. They become protective, they always remind me to consume vitamin, and get sufficient rest.” (Wulan, Surabaya, <10 years of work experience)

There was also a need to be supported by the community. There were people in Surabaya who did not adhere to the COVID-19 restrictions, and some participants expressed their disappointment and frustration towards those people's attitudes. It was felt that such behaviours could risk the safety and wellbeing of frontline workers, including midwives.

For example:

*“I feel angry with people who do not wear masks or hang out in cafes. Why do you guys get together? If you get COVID-19, we [health workers] bear the burden later. I feel like people thought it is our job [as health workers] and our risks. Do not we, as health workers, have the right to be safe? We help many people, but why people do not care about us?”* (Kartika, Surabaya, 20–30 years of work experience)

Participants in both regions shared that they received inadequate protection related to PPE, training and wellbeing support during the pandemic. Midwives felt unprotected in this battle with COVID-19 since it took a long time to receive PPE from the District Health Office. However, they did not stop providing service to the community as one midwife explained:

*“In the early of the pandemic, it was very challenging because PPE was limited, but we had to continue providing maternal healthcare services even without PPE. I think we waited for one or two months till we received PPE. So, it felt like we were going to battle without appropriate armour.”* (Intan, Mataram, 10–20 years of work experience)

Some participants also mentioned that they wore personal raincoats as PPE and bought and made their PPE with their own pocket money due to limited PPE available in the early days of the pandemic. For example:

*“Before we received PPE donations, we wore a raincoat which we bought it for ourselves for providing maternity care..We [also] made our PPE, like a face shield from mica paper.”* (Anisa, Surabaya, 10–20 years of work experience)

Further support on adequate training on how to provide safe maternity care should also be available for midwives to enable them in ensuring the safety of women and themselves during the provision of maternity care. Information on how to provide maternity care during the COVID-19 pandemic was disseminated by District Health officials or the Indonesian Midwives Association through WhatsApp or Zoom meetings. One participant explained:

*“District health officials sent us standard operating procedure on how to provide care for pregnant women through WhatsApp. Not only for pregnant women, but it was also how to provide family planning services, childbirth during the pandemic.”* (Intan, Mataram, 10–20 years of work experience)

However, unfamiliarity with these online platforms and increased workload was claimed to contribute to difficulty in understanding the information being shared. One midwife explained this issue here:

*“I think less than 80% of participants could understand materials given during the training [through Zoom] compared to face-to-face training. [This is because] most of the participants turned off their camera and audio [not familiar with Zoom or unable to attend the training while providing services]. After the training, presentation materials are sent to our email. However, we do not have time to review the materials because we have many patients; we must do contact tracing.”* (Dina, Surabaya, 10–20 years of work experience)

Some midwives also found that the information provided by the District Health officials and The Indonesian Midwives Association were confusing or not clear enough for them to perform their tasks. One participant said:

*“I feel it [information provided] is not sufficient. We are still wondering whether we are allowed to do this or not. For example, in the regulation, we are not asked to do a rapid test for pregnant women in their 37 weeks of pregnancy, but we do it here in Mataram.”* (Citra, Mataram, 10–20 years of work experience)

Regarding wellbeing support, some participants reported that they did not receive any days off from their workplace during the pandemic to self-isolate after being exposed to the suspected COVID-19 exposure

as the number of people with the infection started surging. This participant explained that:

*“In the early of the pandemic, when we helped women suspected of having COVID-19 to deliver their baby, we were asked to take a rest at home for three days [to self-isolate] and got tested for COVID-19. However, now, when we helped women suspected of having COVID-19, no days off, no rapid test.”* (Putri, Mataram, 20–30 years of work experience)

There was concern voiced by participants that they were unable to access regular COVID-19 tests, particularly those from Mataram, none of whom had received routine testing:

*“I hope that there is a routine rapid test for health workers. We only get tested if we have the symptoms. I think we need it, so we know better about our health.”* (Putri, Mataram, 20–30 years of work experience)

### 3.5. Challenges in providing maternity care for women: I cannot provide the best care for women

#### 3.5.1. Discomfort in wearing PPE

Wearing PPE impacted the ability of the midwives to provide maternity care during the pandemic. Despite their need to protect themselves, wearing PPE restricted usual movements. One participant explained:

*“We must wear a mask, PPE, we also must wear a face shield, so I feel I cannot move freely when providing care.”* (Rani, Mataram, 10–20 years of work experience)

Wearing PPE had many effects on midwives including impairment of breathing and vision due to the requirement to wear a full body suit plus double protection of face shield and goggles. One participant said:

*“Wearing a hazmat suit is not comfortable at all. I feel shortness of breath... Before the pandemic, I only wore goggle when stitching [suturing the perineum], but now I wear a face shield and goggle. The goggle turns foggy, and it is not comfortable.”* (Nurul, Surabaya, 10–20 years of work experience)

Some participants found that putting on PPE was often time-consuming and caused delays to provide their maternal health care services. One midwife explained:

*“We need more times to prepare ourselves before helping women deliver their baby. We must wear PPE.”* (Tuti, Mataram, 20–30 years of work experience)

PPE was a barrier to interacting with women, which affected the midwife-woman relationship. Another said:

*“I feel I do not provide maximum care to pregnant women. I mean, I used to have skin to skin contact with them without wearing handschoen [gloves]. I feel something missing, less interaction with them. Feeling distant.”* (Rizka, Mataram, 10–20 years of work experience)

#### 3.5.2. Social and travel restrictions

Social and travel restrictions affected midwifery care as explained by this participant who felt she was unable to provide optimum care when unable to see the woman face to face and provide a full examination:

*“I feel I do not provide the best care for women since I only communicate with women through phone. I feel it [phone consultation] is not sufficient because when women had a medical issue, I used to ask them to check their pregnancy at primary health centre, or I went to their houses to check their condition.”* (Rizka, Mataram, 10–20 years of work experience)

Home visits was a preferred mode of providing service for some participants compared to phone consultation for, evidenced here:

*“I prefer to do home visits than a phone consultation. So, I can be sure about the actual condition of women. When I monitor them by phone, I can only assume what their condition is like, so I do not know whether it is true or not.”* (Dinda, Surabaya, 10–20 years of work experience)

In addition, midwives had to concede that postnatal maternity care had to be shared with community health workers due to the closure of integrated health posts:

*“We used to monitor the condition of post-partum women at integrated health posts, but during the pandemic, integrated health posts are closed. We continue coordinating with community health workers to monitor post-partum women’s condition, so women continue receiving [postnatal care] services that they need.”* (Putri, Mataram, 20–30 years of work experience)

### 3.5.3. Difficulty finding a referral hospital

It was difficult to provide the best care for women who needed further medical support from a hospital. Women’s fears of COVID-19 were recognised as a barrier for midwives to refer women to a referral hospital. One midwife said:

*“Many patients do not come to primary health centre to check their pregnancy during the pandemic since they are afraid to visit a health facility. They visit primary health centre for birth with active labour and without PCR [for SARS-CoV-2] test result. It is too late to test them for COVID-19. [Without the test result] we cannot refer them [to hospital], so we must help them [at primary health centre].”* (Nurul, Surabaya, 10–20 years of work experience)

Another barrier to women being able to access a referral hospital was non-recognition by the hospital of their COVID tests. To refer pregnant women from primary health centre to hospitals during the pandemic, pregnant women were required to have a result of the COVID-19 test. However, this participant reported that referrals were not accepted, despite the availability of the COVID-19 test result:

*“Hospital requires us to do a rapid test for pregnant women before referring them to the hospital. We tested the pregnant women, and if the result is positive, hospital refuses to treat them. If the result is negative, they also refuse to treat them [laughing]. So, what can I do? We do not have a choice except to help them to give birth at primary health centre even though the women are suspected COVID-19 case.”* (Intan, Mataram, 10–20 years of work experience)

Before the pandemic, midwives were responsible for the referral process themselves, but during the pandemic it was difficult to find a referral hospital. To ensure a smooth process of referring pregnant women to the hospital and women could be admitted to the hospital, some participants in both regions stated that they asked District Health officials to facilitate their communication with the hospital, as described by this participant:

*“Sometimes we must ask help from district health officials [to refer pregnant women to hospital]. The officials will recommend a referral hospital and help us to communicate with the hospital.”* (Dinda, Surabaya, 10–20 years of work experience)

## 4. Discussion

Our findings show that midwives in Surabaya and Mataram, Indonesia, strived to deliver maternity care during the COVID-19 pandemic. Despite the difference in the numbers of people with COVID-19 between the study sites, midwives in Surabaya and Mataram shared similar experiences in providing care, except for an increase in workload, which was mostly faced by midwives in Surabaya.

Midwives in this study expressed their fears of being infected with COVID-19 and worried about their family’s wellbeing. Findings from

other studies on maternity care providers experiences during the COVID-19 pandemic also have found that maternity care providers’ fears of being contracted with the disease and able to transmit it to their family were key issues [9,12,13]. Inadequate knowledge of COVID-19, working closely with suspected or confirmed people with COVID-19, colleagues being infected with COVID-19 and colleagues who died from the disease contributed to midwives fears of COVID-19. Similarly, other studies conducted on the previous disease outbreaks have found that limited information of the disease and deaths of colleagues amplifies health workers’ fears of the disease [36–38].

Due to concerns of personal and family safety, during previous emergency situation some midwives decided to stay at home as they prioritised their autonomy to protect their family and themselves above their obligation to provide care [36]. However, no midwives in this study reported refusing to go to work despite their concerns. Some midwives even showed a strong sense of responsibility to continue providing maternity care during the COVID-19 pandemic. The dedication of midwives may be attributed to a strong sense of professional identity, duty and the requirement to practice according to the midwives’ Code of Conduct [39]. Loyalty to colleagues is reflected in this study by midwives describing giving and accepting continuous emotional support to each other and feeling empathy regarding any additional burden that would result from them not continuing with their own workload. Having emotional and psychological support from peers have been known as one of the key enablers for health workers’ to continue working during the disease outbreaks [37,38].

It is essential that midwives are adequately protected by ensuring vaccines, equipping them with sufficient PPE, training and wellbeing support since they are a valuable resource to safeguard not only midwives’ but also women’s and the broader community’s safety during the pandemic [15,40]. However, for midwives, adequate protection was not always available. Health workers in other parts of the world have reported difficulty accessing PPE and have had to use non-medical equipment to substitute for official PPE [11,41]. Similarly, many midwives in this Indonesian study described the difficulties of working with limited protection, with one midwife calling it “going into battle without appropriate armour”. Other midwives reported that they also had to rely on alternative methods, such as wearing raincoats to protect themselves against virus transmission. In addition to the findings, as of September 2021, there remains a low number of fully vaccinated people in Indonesia, which further contributes to the unsafe working environment for health workers, including midwives. At the time of data collection in early 2021, vaccination for COVID-19 had not yet started in Indonesia, but at the time of publication in September 2021 approximately 16% of the general population have been vaccinated [42]. More people should be fully vaccinated to support safe working environment for health workers and protect other people from COVID-19. Inadequate PPE, and slow vaccines rollout created an unsafe working environment for midwives in the study which put them in higher risk of COVID-19 exposure and deaths.

Despite the availability of an information dissemination session, some midwives in this study described their inadequate understanding of how to provide maternity care during COVID-19 pandemic shared by District Health officials or the Midwives’ Association. Unfamiliarity with an online platform to access the information and unclear information provided were reported to contribute to some midwives’ confusion on what should midwives do when providing care to women. This demonstrates a requirement to improve the delivery of the information dissemination session so that midwives have adequate capabilities to protect themselves in overcoming potential risks in line with their duty and ensure the quality of maternity care provided [11,43]. The findings from this Indonesian study warrant urgent attention from District Health officials, the Midwives Association and other stakeholders, including government, in order to ensure midwives’ wellbeing by providing adequate protection for frontline workers, including vaccines.

Some midwives highlighted that their communities did not adhere to



COVID-19 restrictions. Midwives' perceptions of non-compliant attitudes to COVID-19 restrictions from community members could reflect the community's lack of trust towards the government sources of information. Research in Indonesia has shown low trust in COVID-19 information provided by the government due to perceptions of lack of transparency, clarity, trustworthiness, and comprehensibility [44]. Lack of trust in government information has translated to the public seeking COVID-19 information from other sources, such as social media, which has been mired by misinformation throughout the pandemic in Indonesia [45]. Building trust in government during a public health crisis is essential to ensure compliance with the disease prevention and control policy [46]. To protect health workers and other people from the COVID-19, health workers and the government should engage with the community to build the community's trust in the government.

#### 4.1. Strengths and limitations

Our study contributes to a better understanding of the provision of maternity care during the COVID-19 pandemic in Indonesia. However, further research should be conducted to investigate women's experiences accessing maternity care, referral hospitals' perspectives related to the referral process, and challenges faced by the health system regarding resource limitation during the pandemic to provide a holistic view of factors influencing the provision of maternity care in Indonesia during the COVID-19 pandemic. Our study adopted the constructivist paradigm and stratified purposive sampling to explore Indonesian midwives' experiences in two geographical regions; thus, their experiences may not represent all midwives. However, our findings' transferability may be improved as the two study sites represent a different part of Indonesia, western and eastern part of Indonesia, and we reached data saturation indicating that the findings of this study were rich and in-depth. Moreover, two authors (the primary researcher and fourth author) are from similar cultural backgrounds as participants and have experience working with midwives in Indonesia. Thus, readers could use our study's findings to infer the applicability of the findings to their needs. As the interviews were conducted online, connectivity was a challenge in some interviews. To address this, participants experiencing connectivity issues had the option to continue the interview on the same day after their connection was more stable. We note that face-to-face interviews were not possible due to the pandemic.

#### 4.2. Conclusion

Providing maternity care during the COVID-19 pandemic leads to formidable challenges for maternity care providers. Midwives in Surabaya and Mataram, Indonesia, continue to provide maternity care despite their concerns about their personal and family wellbeing and safety, increased workload, and limited protection from the higher authority for their safety and wellbeing. The pandemic also affected midwives in providing optimum care for women since regulation to wear PPE, social and travel restrictions, and difficulty finding referral hospitals were considered to limit them to provide adequate support for women. Support from peers and family were recognized as crucial support for midwives working under challenging circumstances. All stakeholders involved in the provision of maternity care should collaborate to address how they could support and protect midwives during the pandemic regarding PPE availability, effective training, and support for midwives' wellbeing. Midwives' safe working environment should also be ensured by prioritising COVID-19 vaccines for midwives and ensuring faster vaccines rollout for the general public. Community's support by adhering to COVID-19 prevention and control measures and a good collaboration between primary health centres and hospitals would also benefit midwives in coping with the challenges during the pandemic.

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## Conflicts of interest

The Editor-in-Chief Caroline Homer is a co-author on this paper. The paper was fully managed by Professor Linda Sweet, the Deputy Editor, to remove conflict of interest. Professor Homer played no role in the reviews or final decision.

## Ethical statement

Ethical approval was obtained from the Medicine & Dentistry Human Ethics Sub-Committee of the University of Melbourne (ethics ID number: 2057852.1) and the Health Research Ethics Committee of the Faculty of Public Health of Airlangga University, Indonesia (ethics ID number: 102/EA/KEPK/2020).

## Author contributions

This study was conceptualized and designed by AH with the supervision of MAB, CSEH and SA. AH performed the data collection, and RIZ checked the accuracy and completeness of interview transcriptions. The analysis was conducted by AH, and interpretations were discussed by all authors. AH also drafted the manuscript with input from all. All authors contributed to the revision of the manuscript and approved the final version.

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## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.wombi.2021.10.003>.

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