Original Article

Knowledge, Attitudes, and Anxiety of Midwives Toward Maternal Care During the COVID-19 Pandemic: A Descriptive Study on Midwives Who Experience the Perinatal and Breastfeeding Phases

Abstract

Background: People all over the world, including pregnant women, have experienced stress and anxiety due to the coronavirus disease 2019 (COVID-19) pandemic. Providing services during the pandemic is something that midwives in primary health care cannot avoid. This study assesses a midwife's knowledge, attitude, and anxiety toward providing maternal care during the pandemic. **Material and Method:** A cross-sectional design was used in this study, which involved 183 midwives who provided midwifery services at hospitals and health centers and had experience with the perinatal and breastfeeding phases. Using the Google Forms tool, respondents completed a questionnaire regarding their knowledge, attitudes, and anxiety toward maternal care during the COVID-19 pandemic. **Results:** One hundred eighty-two midwives (99.50%) understood maternal care well during the COVID-19 pandemic. In addition, the maternal care provided during the COVID-19 pandemic was viewed favorably by almost all the participants. The percentage of midwives working in primary care in the perinatal phase who had moderate-to-severe anxiety levels during the COVID-19 pandemic was 17 women (27.42%). **Conclusions:** The knowledge and attitudes of midwives about the COVID-19 pandemic in this study were good, and there was a smaller percentage of midwives with an extreme level of anxiety.

Keywords: *Anxiety, breastfeeding, COVID-19, health attitude, midwifery, perinatal care*

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Introduction

Coronavirus disease 2019 or COVID-19 is a novel respiratory disease that has spread rapidly and globally. This disease was first discovered in the Chinese State of Wuhan City, Hubei Province.[1] On March 11, 2020, the World Health Organization (WHO) officially declared it a pandemic.[2] On April 4, 2020, WHO reported that the global number of confirmed cases had surpassed one million.[3] WHO reported that COVID-19 prevalence in Indonesia was between January 3, 2020, and August 19, 2021, with 3,930,300 confirmed cases and about 122,633 fatalities.[4] Based on previous epidemic cases Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome Coronavirus (MERS) and due to mental and physical changes that women undergo during pregnancy, pregnant women are at risk of being infected with COVID-19.[5] COVID-19 infection may result in acute respiratory distress syndrome (ARDS) and cause maternal and neonatal complications.[6] Special precautions based on conventions and best practices in obstetric management must be observed to prevent cross-infection from healthcare providers performing procedures that require close physical contact and avoid droplet exposure, such as during vaginal delivery.[5]

Approximately 85% of COVID-19-positive pregnant women have a mild disease, 10% have a more severe illness, and 5% are in critical condition.[7] The most common clinical symptoms of COVID-19 infection in pregnant women are fever, cough, dyspnea, and diarrhea.[7,8] However, several studies have suggested that the complications of COVID-19 in pregnant women are maternal and fetal malperfusion, increased premature rupture of membranes, placental abruption, preterm delivery, and low birth weight.[8-10] However, the

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short- and long-term effects of COVID-19 infection on fetus development are largely unclear.

Midwifery, offered by midwives independently through collaboration and referrals, is a form of professional service that is integral to the healthcare system.[11-13] Despite the COVID-19 pandemic, midwives must continue to provide professional midwifery services while also attending to their safety against COVID-19 transmission; therefore, midwives must have the knowledge, attitudes, and appropriate actions necessary for managing midwifery care during the pandemic.[14] In addition, midwives in primary care cannot escape the services they must offer during the COVID-19 pandemic, not only in their capacity as clinical service professionals but also as mothers during the phases of pregnancy, childbirth, postpartum, and breastfeeding. However, the level of readiness of midwives, particularly those who experience the perinatal and breastfeeding stages, regarding knowledge, attitude, and anxiety about providing midwifery care services during the COVID-19 pandemic, has not been reported. Therefore, this study aimed to assess midwives' knowledge, attitudes, and anxiety who have experienced perinatal and breastfeeding phases in delivering maternal care in Indonesia during the COVID-19 pandemic.

Material and Method

The material study used a questionnaire toward knowledge, attitudes, and anxiety. Statement questionnaires related to knowledge, attitudes, and anxiety levels were administered to collect the data. Data collection was performed using Google Forms. The questionnaire contained ten questions to gauge knowledge, eight to measure attitudes toward maternity care, and twenty to evaluate anxiety levels during the COVID-19 pandemic. Before it was given to the actual research subjects, the questionnaire was validated by experts and tested in volunteer groups to reduce bias. As research subjects, participants were asked to fill out a consent form. During a webinar, data collection was conducted simultaneously using Google Forms.

This research is a descriptive study with a cross-sectional approach conducted between July 15 and August 15, 2021. The subjects were 183 midwives in Indonesia who were given primary care obstetrics at hospitals and health centers and had participated in perinatal and breastfeeding phases. There were 50 midwives who provided services for expectant mothers, 12 for postpartum care, and 121 for breastfeeding. A number of samples were calculated with the proportion formula by Lemeshow, which used alpha value of 0.05 and Z value of 1.96, and the COVID-19 proportion of perinatal and breastfeeding women in Indonesia was 13.8%.[15]

This study employed a "true" and "false" closed-ended questionnaire on 20 items related to COVID-19: definition, etiology, symptoms, prevention, and handling of the pandemic. Three categories were used to categorize the level of knowledge: "Low" for answers with a correct answer score between 0 and 50%, "Moderate" for answers with a correct answer score between 51 and 75%, and "High" for answers with a correct answer score between 76 and 100%. A Likert scale was used in the questionnaire evaluating attitudes toward COVID-19: strongly disagree, disagree, agree, and strongly agree. Eight questions were categorized into positive and negative answers [Table 1]. The anxiety questionnaire was followed by the Zung Self-Rating Depression Scale (SDS); the questionnaire consists of 15 questions on increased anxiety and five questions on decreased anxiety. In addition, all data were descriptively analyzed using the IBM SPSS Statistics version 21 software, and frequency distribution data were presented in tabulated form using univariate methods.

Ethical considerations

This research received ethical approval from the Palembang Health Polytechnic Ethics Committee, No. 1032/KEPK/Adm2/VI/2021. The respondents willingly agreed to participate in the study, completed the questionnaire, and provided informed consent. We keep their identities confidential using initials or disguising the respondents' identities.

Results

The characteristics of the respondents were age, residence, and knowledge. Almost all of the respondents were 32 to 33 years old. The distribution of residences in urban and rural areas was 93 women (50.80%) and 90 women (49.20%), respectively. Furthermore, the respondents exhibited a high level of knowledge: 182 women (99.50%) [Table 2].

Based on the attitude questionnaire outcome analysis, we discovered that almost all of the perinatal and breastfeeding respondents strongly agreed with providing adequate antenatal and postnatal care, following the COVID-19 prevention protocol, boosting immunity, increasing knowledge of COVID-19, restricting travel to areas, where COVID-19 transmission is likely to occur, and providing online consultation. In addition, 44 (71%) and 96 (79.40%) of perinatal and breastfeeding respondents strongly agreed to quarantine if COVID-19 is confirmed. Furthermore, half of the respondents disagreed with declining a COVID-19 laboratory diagnosis if COVID-19 symptoms are present [Table 1].

We also analyzed the anxiety levels of perinatal and breastfeeding respondents. We found that more than half of the perinatal and breastfeeding respondents had normal anxiety levels in pregnant women (35 (70.00%)), postpartum care (10(83.00%)), and breastfeeding (85 (70.25%)). In addition, many participants had low–moderate-to-severe anxiety during the COVID-19 pandemic. We also found that

Table 1: Distribution of the frequency of attitudes toward maternal care provided during the COVID-19 pandemic in midwives who experienced perinatal and breastfeeding (*n*=183)

Questions	Perinatal (*n*=62) *n* (%)	Breastfeeding (*n*=121) n (%)
1. Giving adequate antenatal and postnatal care		
Strongly disagree	0 (0.00)	0 (0.00)
Disagree	0 (0.00)	1 (0.80)
Agree	3 (4.80)	8 (6.60)
Strongly agree	59 (95.20)	112 (92.60)
2. Carrying out the COVID-19 prevention protocol		
Strongly disagree	0 (0.00)	2 (1.70)
Disagree	2 (3.20)	6 (5.00)
Agree	12 (19.40)	17 (14.00)
Strongly agree	48 (77.40)	96 (79.30)
3. Increased immunity		
Strongly disagree	0 (0.00)	0 (0.00)
Disagree	0 (0.00)	0 (0.00)
Agree	17 (27.40)	33 (27.30)
Strongly agree	45 (72.60)	88 (72.70)
4. Improved knowledge about COVID-19		
Strongly disagree	0 (0.00)	0 (0.00)
Disagree	0 (0.00)	1 (0.80)
Agree	13 (21.00)	10 (8.30)
Strongly agree	49 (79.00)	110 (90.90)
5. Restrict visiting COVID-19 risk regions		
Strongly disagree	0 (0.00)	1 (0.80)
Disagree	0 (0.00)	0 (0.00)
Agree	19 (30.60)	26 (21.50)
Strongly agree	43 (69.40)	94 (77.70)
6. Intents to provide online consultation		
Strongly disagree	0 (0.00)	0 (0.00)
Disagree	2 (3.20)	0 (0.00)
Agree	17 (27.40)	37 (30.60)
Strongly agree	43 (69.40)	84 (69.40)
7. Quarantine if confirmed COVID-19		
Strongly disagree	1 (1.60)	1 (0.80)
Disagree	1 (1.60)	0 (0.00)
Agree	16 (25.80)	24 (19.80)
Strongly agree	44 (71.00)	96 (79.40)
8. Refusing COVID-19 laboratory diagnosis if COVID-19 symptoms appear		
Strongly disagree	12 (19.30)	24 (19.80)
Disagree	35 (56.50)	68 (56.20)
Agree	6 (9.70)	9 (7.40)
Strongly agree	9 (14.50)	20 (16.60)

some pregnant and breastfeeding participants experienced extreme anxiety levels [Table 3].

Table 2: Characteristic of samples

Variables	*n* (%)	Mean (SD)
1. Age		
Perinatal		
• Pregnancy	50 (27.30)	32.06 (3.07)
• Postpartum	12 (6.60)	33 (4.30)
Breastfeeding	121 (66.10)	32.23 (4.02)
2. Residence		
Urban	93 (50.80)	
Rural	90 (49.20)	
3. Knowledge		
• Poor	0 (0.00)	
• Average	1 (0.50)	
• High	182 (99.50)	

Discussion

Even during a pandemic, a midwife fulfills the motherly duty of experiencing pregnancy, childbirth, and breastfeeding. The COVID-19 infection poses a serious threat to pregnant mothers and their babies. Therefore, special precautions were needed to prevent cross-infection from healthcare providers performing procedures that require close physical contact and avoid droplet exposure, such as during vaginal delivery. A midwife's job is challenging because of the harsh working conditions, the threat of contamination, and the need to focus on women-centered care, maintain communication, and offer emotional support to pregnant women with COVID-19 infection.[16] Midwives in the perinatal period and breastfeeding must be free from this condition. However, until now, no precise regulation governs this matter. According to a study in Turkey on midwives' experiences when caring for pregnant women with COVID-19 infection, providing additional psychological support is crucial in lowering the midwives' negative experiences.[17] Therefore, based on the conventions and best practice recommendations, midwifery management during the COVID-19 pandemic requires an appropriate approach.

According to this study, participants have a high level of knowledge about COVID-19 and a positive attitude toward preventing COVID-19 transmission, improving immunity, enhancing knowledge, avoiding places at risk of COVID-19 transmission, and striving to improve online consulting services. However, it is different compared to pregnant women who are not health workers.[14] We assume that massive dissemination of information concerning the control, prevention, and management of COVID-19 significantly improves health workers' knowledge. Therefore, providing the maternal group with adequate information will effectively increase their understanding of COVID-19.[18]

The respondents in this study had a "strongly agree" attitude toward offering optimal midwifery services, perhaps because midwives are aware that both perinatal and

Table 3: Frequency distribution of the anxiety level of midwives undergoing a perinatal and breastfeeding period during the COVID-19 pandemic (*n*=183)

Anxiety of respondents	*n* (%)
1. Perinatal (*n*=62)	
Pregnant (*n*=50)	
a. Normal	35 (70)
b. Low–moderate	10 (20)
c. Severe	4 (8.00)
d. Extreme	1 (2.00)
Postpartum (*n*=12)	
a. Normal	10 (83)
b. Low–moderate	1 (8.30)
c. Severe	1 (8.30)
d. Extreme	0 (0.00)
2. Breastfeeding (*n*=121)	
a. Normal	85 (70,25)
b. Low–moderate	22 (18.18)
c. Severe	11 (9.09)
d. Extreme	3 (2,48)

breastfeeding women will need support from midwifery services.[19] Moreover, several nations have implemented regulations to stop the spread of COVID-19, such as limiting perinatal visits, offering telemedicine services, and determining who is allowed to visit intrapartum patients.[17,20] This study was responded to with a positive attitude; nearly all participants strongly agreed to limit visits to COVID-19 transmission risk regions, increase online consultation, and quarantine in the event COVID-19 is confirmed.

Furthermore, this study discovered that many participants experienced low-to-moderate anxiety, and a few pregnant and breastfeeding participants experienced extreme anxiety levels during the pandemic [Table 3]. According to a study in Turkey, the prevalence of depression in midwives and nurses was 31.8%, with midwives having a 1.96-fold higher risk than nurses.[21] The COVID-19 pandemic's stresses led to some midwives quitting their jobs out of burnout and depression.[20] Midwives could likely experience it when providing perinatal and breastfeeding care. Another study stated that health professionals were progressively adapting to the COVID-19 pandemic.[17] Compared to the beginning of the COVID-19 pandemic, there are more professionals now. Many resources are available, including manuals on COVID-19 care and the standard operational protocol. Besides, strict COVID-19 screening before treatment is also observed.[22]

On the contrary, it is seen as a violation of the law and rights of women, newborns, and midwives when mothers cannot get family support during childbirth, newborns are kept in direct isolation from their mothers after delivery, and early breastfeeding is not practiced.[17,23] Therefore, a multidisciplinary and evidence-based approach that considers psychological factors is needed to implement quality midwifery care and prevent transmission of COVID-19 among mothers, babies, and midwives.[24] According to several studies on maternal depression during the COVID-19 pandemic, maternal anxiety is influenced by several factors, including poor knowledge of COVID-19, low education, low economic status, family support, health workers' support, spiritual motivation, and social support.[25-29] Additionally, the separation of newborns from their mothers following the confirmation of COVID-19 and shifts to new coping mechanisms cause significant maternal psychological changes.

This study's limitation is the lack of postpartum respondents because they were focused on their newborn babies. Therefore, we will compare and determine the relevant variables in future research using a control group with a balanced sample number.

Conclusion

The knowledge of midwives who work in primary care and through the perinatal phase was good, and they had a positive attitude toward the COVID-19 pandemic. Nevertheless, a few midwives had a negative attitude toward self-screening if they had COVID-19 symptoms. In addition, some midwives working in primary care had moderate-to-severe anxiety levels throughout the maternal period. Furthermore, it is necessary to make changes to policies regarding clinical midwives' working hours, vaccinate midwives, improve the knowledge and skills of midwives to reduce the risk of COVID-19 transmission, and provide a comfortable quarantine facility for midwives with confirmed COVID-19. In addition, periodic psychological counseling is needed to reduce anxiety during the COVID-19 pandemic.

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Conflicts of interest

Nothing to declare.

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