



Midwives' knowledge of maternal and child health services during the Covid-19 pandemic in the province of Aceh

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ABSTRACT

Background. Coronavirus disease (Covid-19) is a global public health problem and is of great concern because of its potential to cause death and morbidity, particularly among vulnerable groups, including children, the elderly, people with co-morbidities, and health care workers. The risk of health workers spreading the disease is so high that it is critical that they remain knowledgeable about the COVID-19 pandemic and adhere to the service standards established by the Ministry of Health. This study was conducted to determine the factors associated with midwives' knowledge of maternal and child health services during COVID-19. Methods. The study sample consisted of 260 health workers (midwives) in Aceh Province who were members of the professional organization IBI in 2021. A questionnaire was used to measure health workers' knowledge of MCH services. Results. The statistical test results show that there is no significant relationship between age, length of employment, and knowledge of MCH service during the pandemic ($p = 0.251$). There is also no relationship between working hours and Middan's knowledge of MCH. Conclusion. The general public, including health workers, has very little knowledge about the transmission, symptoms, prevention, and control of the disease. Midwives are expected to have good knowledge and behaviors regarding infection prevention and the use of personal protective equipment (PPE) in the care of pregnant women, childbirth, newborns, and emergency complications. However, this study shows that the general public has very little information about the disease, especially in the provision of maternal health services.

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1. Introduction

Coronavirus disease (Covid-19) is a global public health problem and raises deep concerns because it can be fatal and result in death, especially for vulnerable groups including children, the elderly, people with comorbidities, and health workers (ZA et al., 2020). According to data on global distribution as of July 2021, 189,828,099 cases were confirmed out of 151 countries, and 4,085,071 cases resulted in death. In June 2020, there were 3,359 deaths, 31,585 recoveries, and 68,079 confirmed cases in Indonesia (Dinastiti et al., 2022).

In response to COVID-19, a number of nations have implemented a range of measures aimed at inhibiting the virus's spread. These measures include lowering the hospital's patient population and meeting equipment requirements, particularly for personal protective equipment (PPE), as well as

safeguarding susceptible populations, such as the elderly and those with weakened immune systems. Activities include patient contact tracing, self-isolation or quarantine, limiting large-scale public gatherings, encouraging healthy lifestyle practices like hand washing, cough etiquette, and social distancing, and getting the national health system and medical facilities ready to handle a spike in patients needing medical attention depend on the number of infected patients and the degree of case dissemination (Bedford et al., 2020).

In the current COVID-19 pandemic scenario, there are numerous limitations on almost all routine services, including maternity and neonatal health services. For instance, there are suggestions to postpone pregnancy tests and classes for expectant mothers; pregnant women are afraid to visit health centers or other healthcare facilities for fear of contracting an infection; and services are underprepared in terms of staff and infrastructure, including personal protective equipment (Direktorat Jenderal Kesehatan Masyarakat, 2020).

Healthcare workers are particularly vulnerable to diseases such as coronavirus. Health workers need to be safe to avoid spreading the virus, not only because they are responsible for treating sick patients (Adams & Walls, 2020). Despite the diligent efforts of doctors and other health workers during the COVID-19 crisis, including the implementation of strict hygiene behaviors, some medical violations have been reported, and many health workers remain unconcerned about them (Simione & Gnagnarella, 2020). The risk involved in health workers spreading disease is so high that it is critical that they remain knowledgeable about the COVID-19 pandemic and adhere to the service standards that have been established by the Ministry of Health.

Midwives are among the health professionals who provide services in hospitals, clinics, and on their own. As such, they are at risk of becoming ill and spreading disease. Midwives are expected to have knowledge and behaviors regarding infection prevention and the use of personal protective equipment (PPE) in the care of pregnant women, childbirth, newborns, and emergency complications during the COVID-19 pandemic in accordance with the guidelines issued by the Ministry of Health regarding maternal and newborn health services during the pandemic (Direktorat Jenderal Kesehatan Masyarakat, 2020).

It is anticipated that having a solid understanding of COVID-19 will change how the public and healthcare professionals behave, which will enhance public perception and awareness of the illness (Bekele et al., 2020). Midwives, as part of the authorized health personnel providing maternal and child health (MCH) services, are expected to have good knowledge and positive behavior regarding the prevention of COVID-19 transmission in pregnant, lactating, postpartum, breastfeeding, and LBW women. In addition, midwives are also expected to implement preventive measures while providing MCH services.

This study was conducted to determine the factors associated with midwives' knowledge of maternal and child health services during the COVID-19 pandemic. Through this research, it is hoped that it can move the government to increase the development of training programs aimed at increasing the knowledge and skills of midwives in providing maternal and child health (MCH) services during the COVID-19 pandemic, as well as provide support to midwives in improving the quality of care for mothers and babies in the context of maternal and neonatal emergencies to protect people who are vulnerable to the COVID-19 virus.

2. Method

This study used quantitative research methods, using a questionnaire to measure midwives' knowledge of maternal and child health services during the COVID-19 pandemic. The sample in this study consisted of 260 midwives in Aceh Province who met the inclusion criteria. Data collection was done using Google Form application, and data analysis was done using univariate and bivariate analysis with statistical tests using Chi-square test at 95% confidence level. Data processing was performed using the SPSS application.

3. Results and Analysis

3.1 Results

The figures and tables below present the results of univariable analysis of respondent characteristics in each group.

Table 1
Frequency distribution of midwives' knowledge characteristics during the Covid-19 pandemic in Aceh Province

No	Characteristic	f	%	
1	Age	≥ 38 Years	139	53,5
		< 38 Years	121	46,5
2	length of service	≥ 14 Years	136	52,3
		< 14 Years	124	47,7
3	Source of Information	≥ 3 Media	73	28,1
		< 3 Media	187	71,9
4	Knowledge	High	101	38,8
		Low	159	61,2

According to Table 1, 46.5% of respondents were under the age of 38. The tenure of respondents with less than 14 years of experience was 47.7%. 28.1% of the respondents used three or more sources of information. 61.2% of respondents had a low level of knowledge.

Table 2
Analysis of age and midwife knowledge relationship during the covid-19 pandemic in Aceh Province

Age	Midwife knowledge						P-value
	High		Low		Total		
	F	%	f	%	f	%	
≥ 38 Years	49	35,3	90	64,9	139	100,0	0,251
< 38 Years	52	43,0	69	57,0	121	100,0	

According to Table 2, 43% of respondents with high knowledge are under the age of 38. The statistical test results indicate no significant relationship between age and midwives' knowledge of maternal and child health services during the COVID-19 pandemic ($p = 0.251$).

Table 3
Analysis of the relationship between working hours and knowledge of midwives during the Covid-19 pandemic in Aceh Province

Working Hours	Midwife knowledge						P-value
	High		Low		Total		
	F	%	f	%	f	%	
≥ 14 Years	55	40,4	81	59,6	136	100,0	0,671
< 14 Years	46	37,1	78	62,9	124	100,0	

Based on Table 3, it can be seen that respondents with high knowledge are those with a tenure of ≥ 4 years, as many as 40.4%. The statistical test results show that there is no relationship between tenure and midwives' knowledge of maternal and child health services during the COVID-19 pandemic, with a p-value of 0.671.

Table 4
Analysis of the relationship between information sources and midwives' knowledge during the covid-19 pandemic in Aceh Province

Information Sources	Midwife knowledge						P-value
	High		Low		Total		
	F	%	F	%	F	%	
≥ 3 Media	36	49,3	37	50,7	73	100,0	0,043
< 3 Media	65	34,8	122	65,2	187	100,0	

Table 4 shows that respondents with high knowledge are respondents with information sources < 3 media as many as 49.3%. The statistical test results show that there is a relationship between information sources and midwives' knowledge of maternal and child health services during the COVID-19 pandemic, with a p-value of 0.043.

3.2 Discussion

The results showed that the majority of midwives had low knowledge (61.2%) related to maternal and child health services during the COVID-19 pandemic. There is no relationship between age and midwives' knowledge of MCH services during the COVID-19 pandemic. Midwives with high knowledge of MCH services during the COVID-19 pandemic are mostly under 38 years of age.

Research in Saudi Arabia suggests that only 51% of health workers have adequate knowledge of the MERS virus. This highlights the need for greater efforts to improve health workers' knowledge and awareness of the virus. On the one hand, age is associated with low levels of knowledge; older health workers are expected to have higher levels of knowledge and awareness. On the other hand, where health workers work plays an important role in their knowledge and awareness of the MERS virus. Health facilities with high infection control standards and policies will increase the awareness of their workers to implement health protocols at work. (Asaad et al., 2020).

Another study found that there was no association between age and health workers' knowledge of Zika virus (Francis et al., 2021). Another study conducted by Roupa (2021) found that health workers aged 40 years had a positive perception of COVID-19 compared to health workers aged 18-29 years and 30-39 years (Roupa et al., 2021). A person's age greatly influences his or her memory and thinking. However, as one ages toward late adulthood, one's ability to comprehend and remember diminishes.

This study also shows that there is no relationship between working hours and Bidan's knowledge in maternal and child health care during the COVID-19 pandemic with a p-value = 0.671.

Learning experiences on the job that are developed will provide professional knowledge and skills, and learning experiences on the job will be able to develop decision-making skills that are a manifestation of the integration of scientific and ethical reasoning based on real problems in the field of midwifery. The longer a person works in the organization, the higher the productivity. There are two differences between new work and old or experienced work in action. The longer a person's tenure, the more experienced he or she is in action' (Restu, 2019).

The length of work experience is related to the employment pattern of a midwife who works in a health facility and has enough experience to handle patients, so it is expected to increase work productivity, motivation and high morale to enhance professionalism. Long-term work experience is expected to lead to higher levels of knowledge and skills compared to midwives with less than fourteen years of work experience, especially in the provision of maternal and child health services during the COVID-19 pandemic.

This study agrees with Yunus's (2021) research, which finds a correlation between public knowledge of COVID-19 and the sources of information used. Social media is the most common source of information used by respondents (Yunus & Zakaria, 2021). A higher level of knowledge was found among health workers who obtained information about the disease from the Internet, either through social media or the MOHP/WHO website, resulting in health workers having a positive attitude toward COVID-19 prevention (Abdel Wahed et al., 2020).

This research is further supported by a study conducted in Bangladesh, which reported that 97.8% of respondents learned about Covid-19 from a variety of media (social media, television, government information, religious leaders and public figures). However, this study shows that the general public, including health workers, have very little knowledge about the transmission, symptoms, prevention and control of the disease. This is also influenced by the respondent's age (40-50 years), profession, and the quantity and quality of information available. In particular, the accuracy of the information circulating comes from both the media and health professionals (Farhana, 2020).

Health workers are more likely to get information about COVID-19 from social media than from official WHO and Ministry of Health websites, according to research conducted in China. This is important because health workers need accurate and trustworthy information to share with the public and other health workers (Huynh et al., 2020).

4. Conclusion

Midwives' age, tenure, and knowledge of MCH services during the COVID-19 pandemic were not associated, but there was an association between midwives' sources of information and their knowledge of MCH services during the pandemic. This information may inform future research and interventions aimed at addressing the specific needs and challenges midwives face in providing health services during the pandemic.

Limitations of this study include its focus on a specific region (Aceh Province) and a specific group of health workers (midwives), which may limit the generalizability of the findings to other regions and health workers. Further research is needed in different regions or countries to compare the knowledge of midwives and other health workers in maternal and child health services during the COVID-19 pandemic. In addition, the effectiveness of different educational interventions and training programs in improving midwives' knowledge and skills in providing maternal and child health services during public health emergencies needs to be further explored.

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