

# Knowledge on Health Protocols and Anxiety of Midwives in Delivery Assistance During the Covid-19 Pandemic

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## ABSTRACT

In 2021, 6 out of 45 midwives at the PMC Hospital of Jombang were exposed to COVID-19. This study aims to identify the correlation between knowledge on health protocols and anxiety in delivery assistance during the Covid-19 pandemic. This was an analytical-correlational study with cross sectional approach. The independent variable was the knowledge on health protocols and the dependent variable was the level of anxiety in delivery assistance during the Covid-19 pandemic. The study was conducted at PMC Hospital of Jombang on June 28, 2021 – July 12, 2021. The study population involved all midwives at PMC Hospital of Jombang as many as 45 respondents, with a sample size of 32 respondents, who were selected using a simple random sampling technique. Data collection tool used a questionnaire. Data were analyzed using the Chi Square test. The study findings showed that 68.8% of respondents had a good level of knowledge on health protocols. On the other hand, 87.6% of respondents had mild level of anxiety in delivery assistance during the mild COVID-19 pandemic. There was a correlation between the level of knowledge on health protocols and anxiety of midwives in delivery assistance during the Covid-19 pandemic. It was obtained a p-value of (0.000)  $<\alpha = (0.05)$ ,  $r=0.596$  which indicated moderate correlation level. The higher the level of knowledge, the lower the level of anxiety. Midwives are surely able to overcome anxiety they experience through good knowledge which can encourage good spirits, especially while providing obstetric support services to patients during the Covid-19 pandemic.

Pada tahun 2021, jumlah bidan yang terpapar COVID-19 adalah 6 dari 45 bidan di RS PMC Jombang. Tujuan penelitian ini adalah untuk mengidentifikasi hubungan antara pengetahuan kebidanan tentang protokol kesehatan dengan kecemasan pada bidan di masa pandemi Covid-19. Pendekatan cross sectional untuk desain penelitian analitik. Variabel bebas adalah pengetahuan bidan tentang protokol kesehatan dan variabel terikat adalah tingkat kecemasan bidan dalam kebidanan selama pandemi Covid-19. Penelitian dilaksanakan di RS PMC Jombang pada tanggal 28 Juni 2021 – 12 Juli 2021. Populasi yaitu seluruh bidan di RS PMC Jombang sebanyak 45 responden, dengan jumlah sampel 32 responden. Teknik sampling acak sederhana. Kuesioner berfungsi sebagai alat penelitian. Analisis data uji Chi Square. Hasilnya tingkat pengetahuan protokol kesehatan baik 68,8%. Tingkat kecemasan dalam pertolongan persalinan di masa pandemi ringan COVID-19 sebesar 87,5%. Ada hubungan antara tingkat pengetahuan tentang protokol kesehatan dengan kecemasan bidan dalam pertolongan persalinan di masa pandemi covid-19. P-value (0.000)  $<\alpha = (0.05)$ ,  $r=0.596$  tingkat hubungan sedang. Semakin tinggi tingkat pengetahuan, semakin rendah rasa takutnya. Bidan dapat mengatasi ketakutan yang dialaminya. Pengetahuan bidan yang baik tentang pandemi covid-19 dapat mempengaruhi semangat yang baik untuk tidak merasa takut, terutama dalam memberikan pelayanan penunjang kebidanan kepada pasien di masa pandemi covid-19.

## **Introduction**

Extreme acute respiration syndrome coronavirus 2 (SARS-CoV-2) has resulted in an infectious disease called COVID-19. In delivery assistance services during the period January - March 2021, there were 6 out of 45 midwives at the Pelengkap Medical Center Hospital of Jombang who had been exposed to Covid-19. The high number of healthcare workers exposed to Covid-19 has led to suboptimal services provided to patients (Handayani et al., 2020; Iswandi & Roro, 2020; Putri, 2020).

Challenges faced while giving delivery assistance during the Covid-19 pandemic are related to: (1) Knowledge of women and families regarding Covid-19 and health services for women and newborns during a pandemic; (2) Not all midwives are isolated from MCH guidelines, family planning, and reproductive health services depend on the seriousness of the symptoms of Covid-19; (3) Within the time of the Covid-19 pandemic, health facilities must be fully prepared to provide PPE; (4) The security of delivery assistance specialists and patients must be ensured to avoid infection; (5) Access to primary health facilities or midwifery services in the Covid-19 pandemic era were changed to constrain administrations; (6) The high number of Covid-19 patients treated in referral health centers had an effect on the management of maternal and neonatal referral administrations (Simbolon et al., 2021; Sandhi & Dewi, 2021; Nurjasm, 2020).

Based on data as of February 10, 2021, the maternal mortality rate worldwide was 21.89%, in the United States it was 2.3%. On the other hand, in Indonesia as of February 10, 2021 there were 1,183,555 confirmed cases of Covid-19 with a total death of 32,167 people and Indonesia became the 19<sup>th</sup> country with the highest confirmed cases of Covid-19 and East Java ranked the 15<sup>th</sup> in Indonesia with the highest confirmed cases of Covid-19 (Wahyuni, 2021; Coronavirus, 2021). Overall, the mortality rate due to Covid-19 was still lower when compared to extraordinary events by other sorts of coronavirus, namely Severe Acute Respiratory Syndrome-coronavirus (SARS-CoV) and Middle East Respiratory Syndrome-Coronavirus (MERS-CoV) by 10 % and 40%, respectively (Aziz, 2020). Based on data derived from the PONEK Department of the Pelengkap Medical Center Hospital of Jombang for the period June-December 2020, there were 6 spontaneous deliveries and 16 Caesarean Section deliveries with suspected and confirmed Covid-19. In January 2021, there were 3 spontaneous deliveries and 13 Caesarean Section deliveries with suspected and confirmed Covid-19. In February 2021, there were 7 spontaneous deliveries and 9 Caesarean Section deliveries with suspected and confirmed Covid-19. Furthermore, in March 2021, there were 1 spontaneous delivery and 5 Caesarean Section deliveries with suspected and confirmed Covid-19.

Maternity care administrations are a form of proficient benefit which is a necessarily portion of the wellbeing care framework provided by delivery assistance specialists in autonomous, collaborative, and/or referral manners. Midwifery practice is an activity of providing services performed by midwives in the form of midwifery care (Erawati et al., 2019; Telaumbanua, 2019). In the era of the Covid-19 pandemic, all individuals are required to carry out activities in accordance certain guidelines to ensure patient wellbeing. Delivery assistants as the agents are profoundly prioritized for clear information so as not to influence their mindsets (Noer et al., 202 C.E.; Priyanto & Ag, 2020).

Protocols or guidelines for delivery assistance performed by midwives during the Covid-19 pandemic include: (1) If there are signs of labor, patient should immediately contact the midwife by telephone/WA, the midwife will screen for risk factors including the risk of Covid-19 (Lailiyah & Daniyanti, 2021). If there are risk factors for Covid-19, the patient should be immediately referred to the Hospital according to standards; (2) Thorough assessment should be performed according to standards with Covid-19 precautions, the midwife can coordinate with the head of RT/RW/Village regarding the status of the women whether she is in independent isolation (People Under Monitoring (ODP)/Patients Under Supervision (PDP)/ positive for Covid-19); (3) Delivery assistance should be performed according to Normal Delivery Guideline standards, IUD insertion should use level 2 PPE and there should be implementation of protocols for preventing transmission of Covid-19 to women who are not PDP, patients and a maximum of 1 companion should wear a mask; (4) If unable to provide delivery assistance, midwife should immediately collaborate and refer to hospital according to standards; (5) Family/companion and all teams in charge should implement the Covid-19 transmission prevention protocol; (6) There should be planned delivery referrals for women with risks including ODP/PDP/ Covid-positive by standards (Nurjasmi, 2020).

Based on previous study conducted by Mawarni at Laburan Baji Hospital, it was found that 68.6% of respondents had good knowledge about how to provide delivery assistance to patients within the period of the Covid-19 pandemic. Such condition was influenced by difference in the level of knowledge of each person. Based on previous study, it was found that there was a significant correlation between knowledge and the anxiety level of respondents in providing assistance to patients during the Covid-19 pandemic (Khotimah, 2020; Marwani, 2021; Noor & Haryati, 2021).

Based on previous study conducted by Khotimah at Dharmasraya Regency, West Sumatra, it was found that 65.7% of respondents had a moderate level of anxiety in delivery assistance during the Covid-19 pandemic. It was influenced by the different emotional levels of each individual. Anxiety are divided into 3 types, namely: objective anxiety, neurosis anxiety, and moral anxiety. Signs and side effects of patients with anxiety are uneasiness, stress, awful sentiments, fear of possess contemplations and crabbiness, tense, eager and startle. In addition, patients said that they were perplexed of being alone or in a crowd and numerous individuals, had poor sleep quality, restless and disturbed by nightmares (Khotimah, 2020).

A good level of knowledge can overcome anxiety in delivery assistance during the period of the Covid-19 pandemic. Without anxiety, oneself can receive all forms of knowledge or information more openly (Khotimah, 2020; Nurkidam et al., 2020; Angraini et al., 2020). Covid-19 pandemic is a new thing for all healthcare workers, so there is a need for readiness among healthcare workers, especially midwives that is supported by a good level of knowledge. Anxiety can disrupt the midwife's role in providing health services to patients, which leads to suboptimal services. Therefore, good knowledge regarding proper delivery assistance is required during the Covid-19 pandemic to continuously provide optimal service.

Endeavors ought to be made to decrease the number of staffs in the delivery room and the unit ought to create a specific arrangement indicating the staff to be involved in treatment. Only one person (spouse/family member) can accompany the patient. The companion must be informed of the risk of transmission and they must wear appropriate PPE while accompanying the patient. The Infection Prevention and Control strategy to prevent or break the chain of transmission of Covid-19 infection in health care facilities can be achieved by applying the principles of preventing and controlling the risk of transmission of Covid-19, among others: Application of Isolation Precautions, coughing or sneezing etiquette, environmental hygiene, linen management, waste management, disinfection of patient care equipment by type, safe injecting practices, precautions based on transmission (droplet, contact and airborne) (Handayani et al., 2020; Wicaksono, 2020; Kostania et al., 2021; Ertiana et al., 2020).

Actualization of wellbeing conventions to anticipate the transmission of Covid-19 should be maintained so as to prevent transmission among healthcare workers and patients. Isolation of healthcare workers with appropriate PPE and management of isolation of babies from mothers with suspected/contact/confirmed Covid-19 are the main focus in the management of delivery assistance. In addition, there should be a distance of at least 1 meter (when there is no medical action required).

## Methods

This study aims to identify the correlation between knowledge on health protocols and anxiety in delivery assistance during the Covid-19 pandemic. This was an analytical-correlational study with a cross sectional approach. The independent variable was the knowledge on health protocols and the dependent variable was the level of anxiety in delivery assistance during the Covid-19 pandemic.

There were 45 midwives working at the Pelengkap Medical Center Hospital of Jombang, with a sample size of 32 respondents, who were selected using a simple random sampling technique. The study samples from 45 respondents were randomly selected using excel to get 32 people as the study respondents based on the inclusion criteria (midwives who worked at the Pelengkap Medical Center Hospital of Jombang, performed delivery assistance, were willing to be examined and filled out informed consent, had been working >6 months) and the exclusion criteria (midwives who were not actively working at the Pelengkap Medical Center Hospital of Jombang and/or did not assist deliveries at the Pelengkap Medical Center Hospital of Jombang). Data were collected by distributing questionnaires (primary data) regarding knowledge on health protocols and anxiety of midwives using the DASS. The researcher asked several questions to respondents to fill out the questionnaire. The researcher rechecked the answers for each questions so that nothing was left behind and in accordance with the instructions for filling. Data were analyzed using the Chi Square correlation test.

## Results

**Table 1.** Level of knowledge on health protocols at Pelengkap Medical Center Hospital of Jombang

Level of Knowledge	F	%
Poor < 56	1	3.1
Moderate 56-75	9	28.1
Good 76-100	22	68.8
Total	32	100

Most of respondents (68.8%), namely 22 out of a total of 32 respondents had a good level of knowledge on health protocols.

**Table 2.** Level of anxiety in delivery assistance during the Covid-19 pandemic at Pelengkap Medical Center Hospital of Jombang

Level of Anxiety	F	%
Normal	2	6.25
Mild	28	87.5
Moderate	2	6.25
Rather Severe	0	0
Severe	0	0
Total	32	100

Of a total sample of 32 respondents, 2 respondents (6.25%) had normal anxiety, 28 respondents (87.5%) had mild anxiety, and 2 respondents (6.25%) had moderate anxiety. There are several factors of the level of anxiety, one of which is negative experience in viewing the development of Covid-19 pandemic. In addition, anxiety can be due to non-conducive environment.

**Table 3.** Cross-tabulation on the correlation between midwives' knowledge of health protocols and anxiety in childbirth assistance during the Covid-19 pandemic at the Pelengkap Medical Center Hospital of Jombang.

Level of Knowledge	Level of Anxiety						Total	
	Normal		Mild		Moderate		N	%
	N	%	N	%	N	%		
Poor	0	0	0	0	1	3.1	1	3.1
Moderate	0	0	8	88.9	1	11.1	9	28.1
Good	2	9.1	20	90.9	0	0	22	68.8
Total	2	6.2	28	87.5	2	6.2	32	100

*p-value*= 0.000; *r*= 0.596

Based on the table above, 22 of 32 respondents (68.8%), had a good level of knowledge. Meanwhile regarding the anxiety level, most of respondents had a mild level of anxiety as many as 28 respondents (87.5%).

## Discussion

Based on table 1 it was known that 22 respondents (68.8%) had a good level of knowledge, 9 respondents (28.1%) had moderate level of knowledge, and 1 respondent (3.1%) had a poor level of knowledge. Information could be a learning material that can be influenced by inside variables such as inspiration and outside variables within the frame of accessible data and socio-cultural conditions. Thus, good knowledge can also alleviate one's anxiety. Therefore, it is necessary for someone to increase knowledge both from online media and socialization provided by the government through designated healthcare workers.

Based on previous study, it was found that 68.6% of respondents had good level of knowledge on how to provide delivery assistance to patients during the Covid-19 pandemic era. This level of knowledge can be caused because each respondent has a different level of absorption or understanding of knowledge about health protocols for each individual. In this study, most of the respondents had a good level of knowledge, and this is a pretty good thing. There are 6 levels of knowledge, namely: (1) Know, (2) comprehension, (3) application, (4) Analysis, (5) Synthesis, and (6) Evaluation. The factors that influence knowledge include internal factors (education, work, age), environmental and socio-

cultural factors. The category of knowledge can be interpreted on a qualitative scale, namely: good, moderate, and poor (Khotimah, 2020; Nurlailiyah et al., 2015).

According to previous study, it was found that 37 of 45 respondents (82.2%) had moderate level of knowledge, 8 respondents (17.8%) had good level of knowledge and 81.1% had good behavior. The results of the chi square test obtained a p-value of  $0.037 < \alpha (0.05)$  (OR=7.143), which meant that there was a correlation between knowledge and behavior of pregnant women in performing antenatal care during the Covid-19 pandemic. Women with good level of knowledge had the opportunity of 7.143 times to perform antenatal care/ANC compared to those with moderate level of knowledge during the Covid-19 pandemic (Ariestanti et al., 2020).

An increase in the level of knowledge among healthcare workers regarding the use of PPE during delivery and the concept of delivery during the Covid-19 pandemic should be achieved. Such increase can be achieved through training about proper use of PPE and the concept of delivery assistance during the Covid-19 pandemic.

Based on table 2, it was known that of a total sample of 32 respondents, 2 respondents (6.25%) had normal anxiety, 28 respondents (87.5%) had mild anxiety, and 2 respondents (6.25%) had moderate anxiety. There are several factors of the level of anxiety, one of which is negative experience in viewing the development of Covid-19 pandemic. In addition, anxiety can be due to non-conducive environment.

Based on previous study conducted by Khotimah at Dharmasraya Regency, West Sumatra, it was found that 65.7% of respondents had a moderate level of anxiety in delivery assistance during the Covid-19 pandemic. It was influenced by the different emotional levels of each individual. Anxiety are divided into 3 types, namely: objective anxiety, neurosis anxiety, and moral anxiety. Signs and side effects of patients with anxiety are uneasiness, stress, awful sentiments, fear of possess contemplations and crabbiness, tense, eager and startle. In addition, patients said that they were perplexed of being alone or in a crowd and numerous individuals, had poor sleep quality, restless and disturbed by nightmares (Vikawati et al., 2021; Ningrum, 2021).

According to a previous study on anxiety among healthcare workers, it was found that the majority of respondents did not experience anxiety by 70%. 17.5% of respondents experienced mild anxiety, and most of respondents experienced moderate level of anxiety. The anxiety among healthcare workers is due to the lack of PPE use because some are very limited in number. However, the availability of PPE at the health care facility as the study site was good and complete. Such condition can affect the feelings of being more protected among healthcare workers, so that the majority of respondents experienced mild anxiety. Furthermore, anxiety will cause low visits. Everyone has anxiety within themselves, including healthcare workers, even though they understand the importance of maintaining health. However, when they have to face a pandemic that threatens their lives, it is possible that they will feel tense and anxious since it can threat him as well as his family and the surrounding environment. (Hakiki et al., 2022; Musyarofah et al., 2021; Syahrani, 2020).

During the Covid-19 pandemic, healthcare workers were at the forefront of dealing with such cases. Therefore, there is a lot of challenges faced by healthcare workers, wherein many healthcare

workers died because of Covid-19. The availability of PPE, personal and family history of comorbidities, work background are some of the factors that might cause symptoms of anxiety. Other variables that cause anxiety involve negative encounters within the past and nonsensical contemplations. The level of anxiety is divided into 4, namely: normal, mild, moderate, severe and very severe. In an effort to reduce the level of anxiety, defense, projection, identification, relationships, repression, substitution are required.

Based on the results of the statistical test using the Chi Square correlation, it was obtained shows a p-value of  $(0.000) < \alpha = (0.05)$ . Thus,  $H_0$  was rejected and  $H_1$  was accepted, which indicated that there was a correlation between the level of knowledge on health protocols and the level of anxiety of midwives in delivery assistance during the Covid-19 pandemic with a moderate significant level of  $r=0.596$ . The correlation was positive, meaning that the higher the level of information, the lower the level of anxiety. Such finding is in line with the previous study which obtained a p-Value of  $0.000 < 0.05$ , which implied a correlation between information and the respondent's level of anxiety in providing assistance to patients during the Covid-19 pandemic. A good level of knowledge can overcome anxiety in delivery assistance during the period of the Covid-19 pandemic. Without anxiety, oneself can receive all forms of knowledge or information more openly (Khotimah, 2020). Covid-19 pandemic is a new thing for all healthcare workers, so there is a need for readiness among healthcare workers, especially midwives that need to be supported by a good level of knowledge. When patients come to health facilities, this is a special moment for healthcare workers, especially midwives, who are required to always be on standby if a patient has a maternal emergency. So that while providing delivery assistance during the Covid-19 pandemic, midwives must remain in a healthy condition to be able to provide optimal services.

Based on the results of the study, it can be seen that 10 respondents aged 12 respondents aged 31-36 years 24-30 years had a good level of knowledge. Furthermore, by education, 20 respondents with DIII of Midwifery education and 2 respondents with DIV of Midwifery education had a good level of knowledge. It can also be seen that 5 respondents who had ever been exposed to Covid-19 and 17 respondents who had never been exposed to Covid-19 had a good level of knowledge. In addition, by the years of service, 2 respondents with a working period of 1-3 years and 20 respondents with a working period of  $>3$  years had a good level of knowledge. Based on table 3 regarding correlation between the level of knowledge about health protocols and the level of anxiety in delivery assistance during the Covid-19 pandemic, it was found that 22 respondents (68.8%) had a good level of knowledge, wherein 20 of them (90.9%) had a mild level of anxiety. Furthermore, 9 respondents (28.1%) had a moderate level of knowledge, wherein 8 of them (88.9%) had a mild level of anxiety as many as. In addition, 1 respondent (3.1%) had a poor level of knowledge.

Based on Table 2, it can be seen that there are 20 respondents with a mild level of anxiety. This is already a good thing, considering that respondents had ever received information about Covid-19 and the application of knowledge on health protocols was quite optimal. Based on table 1, it can be seen that there was 1 respondent with poor level of knowledge and a moderate level of anxiety. This is in

accordance with previous study which showed that moderate levels of anxiety made an individual focused on things that were imperative to the prohibition of other perspectives so that an individual entered a state of particular consideration but could still do certain things in a more coordinated way.

Based on the results of the statistical test using the Chi Square correlation, it was obtained shows a p-value of  $(0.000) < \alpha = (0.05)$ . Thus,  $H_0$  was rejected and  $H_1$  was accepted, which indicated that there was a correlation between the level of knowledge on health protocols and the level of anxiety of midwives in delivery assistance during the Covid-19 pandemic with a moderate significant level of  $r=0.596$  (Khotimah, 2020).

Based on theory, it can be concluded that a good level of knowledge can overcome anxiety in delivery assistance during the period of the Covid-19 pandemic. Without anxiety, oneself can receive all forms of knowledge or information more openly (Khotimah, 2020). Covid-19 pandemic is a new thing for all healthcare workers, so there is a need for readiness among healthcare workers, especially midwives that need to be supported by a good level of knowledge. When patients come to health facilities, this is a special moment for healthcare workers, especially midwives, who are required to always be on standby if a patient has a maternal emergency. So that while providing delivery assistance during the Covid-19 pandemic, midwives must remain in a healthy condition to be able to provide optimal services.

## **Conclusions**

Some of respondents at Pelengkap Medical Center Hospital of Jombang, namely 22 respondents (68.8%) had a good level of knowledge. Furthermore, some of respondents at Pelengkap Medical Center Hospital of Jombang, namely 28 respondents (87.5%) had a mild level of anxiety. It can be concluded that there was a relationship between the information provided and the level of anxiety among delivery assistants during the Covid-19 pandemic. Based on the results of the statistical test using the Chi Square correlation, it was obtained shows a p-value of  $(0.000) < \alpha = (0.05)$ . Thus,  $H_0$  was rejected and  $H_1$  was accepted, which indicated that there was a relationship between the level of knowledge on health protocols and the level of anxiety of midwives in delivery assistance during the Covid-19 pandemic with a moderate significant level of  $r=0.596$ .

Healthcare workers, especially midwives, should continue to improve compliance with health protocols that have been implemented in accordance with Covid-19 guidelines. Furthermore, they should provide education on health protocols to other colleagues who do not understand certain health protocols. Future researchers are recommended to involve more samples and optimize the time and materials needed in a study so as to gain better information regarding the relationship between knowledge on health protocols and anxiety in delivery assistance during the Covid-19 pandemic at other health facilities.

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