

## ORIGINAL ARTICLE

### Student's knowledge of covid-19 positive postpartum mother's care

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#### ABSTRACT

**Introduction:** An overview of student knowledge about positive postpartum maternal care for COVID-19, characterized by an acute respiratory infection (ARI) with symptoms of fever, cough, shortness of breath, sore throat, runny nose, and mild pneumonia. This study aimed to determine student knowledge about postpartum COVID-19 care in the hospital. **Objectives:** This study aimed to describe nursing academy students' knowledge of the care of positive covid 19 postpartum mothers. **Methods:** This descriptive study has a cross-sectional design. Fifty-seven students were selected as participants by consecutive sampling technique. This study was conducted from August to December 2020. **Result:** Result of this study found that most were 19-20 years of age, and the factor questionnaire that was most associated with good knowledge was that students in semester 5 were 9.5% interested in maternity nursing at 8.3%. **Conclusion:** Most older students aged 19-20 have sufficient knowledge, namely 60.5%, about the care of postpartum mothers who are Covid-19 positive.

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## 1. Introduction

The COVID-19 virus initially occurred in China, and there have been nine reported cases of pregnant women and ten babies born exposed to the COVID-19 virus at the Zhongnam Hospital, Wuhan University (Liang & Acharya, 2020). The Indonesian government has designated this non-natural disaster as a national disaster through the Presidential Decree of the Republic of Indonesia Number 12 of 2020 concerning the determination of the Non-Natural Disaster for the Disease Virus Spread 2019 (COVID -19) as a national disaster so that maternal and neonatal health services are among the affected services. The impact of access and quality led to increased morbidity and mortality of mothers and newborns, so a referral hospital was formed to treat COVID-19 patients with positive OTG, ODP, PDP, or COVID-19 status (Nursalam et al., 2020; Pradana & Casman, 2020; Soedarsono, 2020).

Almost all levels of society experience pneumonia-like symptoms, including children, adults, the elderly, pregnant women, newborns, and childbirth. In Obstetrics and Gynecology patients who confirmed COVID-19 at Fatmawati Hospital, 14% of the 36 who had self-administered-57 % were waiting for the results. The results of research regarding the picture of anxiety of positive postpartum mothers with COVID-19 using the Postpartum Specific Anxiety Scale (PSAS) questionnaire showed that most mothers experienced a high level of anxiety related to the care of their babies. Strict protocols and spiritual biopsychosocial aspects are needed in carrying out treatment management on pregnant women and childbirth (Rochmawati et al., 2020; Setiati & Azwar, 2020; Setiawati et al., 2021).

Nursing services as part of health services lead to more professional and quality development (Sharma & Dhar, 2016). Nursing requires continuous education, has a branch of knowledge of skills, abilities, and norms, provides specific services, has authority in decision-making and practice, and has a code of ethics as a professional nurse; in this case, students are expected to know about Covid-19 postpartum maternal care so that continuous care can be provided (Crisp et al., 2020).

Nursing service development is carried out, among others, through nursing education which includes mastery of nursing science and technology, scientific problem solving, fostering professional attitudes and behavior, active learning, being independent, and having practical experience in the community (Nursalam, 2014). The courses in maternity nursing semester credit units (SKS) are fewer than medical surgery, so it is necessary to survey students to find out their understanding of knowledge about care for positive COVID-19 postpartum mothers in the field of maternity nursing.

The results of the survey through questionnaires to 70 students at both IIA and IIB levels through WhatsApp Group, showed many do not understand the care for COVID-19 postpartum mothers, so students must be given knowledge about the care of COVID-19 postpartum mothers and are expected to play a role in providing services. Nursing care and helping patients regain optimal health and independent living through physical, emotional, spiritual, and social recovery processes (Eisler & Potter, 2014). Students can also help improve independence and health status. Students in maternity nursing, especially when caring for positive postpartum mothers, can apply their knowledge through therapeutic communication and education individually or in groups according to the needs of patients and families (Zhou et al., 2020). This study aimed to determine the level of student knowledge about postpartum COVID-19 care in the hospital area.

## 2. Methods

This cross-sectional study applied a consecutive sampling technique to select 57 students in East Jakarta. The descriptive research sample is in a population with a slight prevalence of <20%. This study was conducted from August to December 2020. The sample criteria covered students in semesters 3 and 5 nursing academy whose ages ranged from 18-25. The location of this research is at the Hermina Manggala Husada nursing academy, East Jakarta, which has received Director's permit No.021 / HMH / AKP / VIII / 2020. This research was conducted from August to December 2020. The ethical principles applied in this research have been agreed upon and confirmed as passed the test of ethics by the Health Research Ethic Committee of Poltekkes Jakarta 2 No LB.02.01 / I / KE / 00 / 524/2020.

A knowledge questionnaire about postpartum COVID was developed by researchers with reference (Eisler & Potter, 2014), (Zhou et al., 2020) (Silalahi et al., 2013) and consists of questions and answers related to COVID-19 for pregnancy, childbirth, and breastfeeding. The questionnaire consisted of 15 items with multiple-choice questions. Correct answers are given a score of 1, and incorrectly given a score of 0. Measurement of knowledge with a set of tests/questionnaires about objects to be searched was according to (Putra et al., 2016), who states the level of knowledge categorization as follows, sound: 76 -100%, enough: 50-75%, less: <50%. Constructive validity and reliability were carried out for 36 students in different classes of the nursing academy. This questionnaire has been validated, and the reliability found used Pearson Product Moment; the result of the validity test used  $r$  table ( $\alpha = 5\%$ ) and stated that among 16 questions correlation coefficient ( $r$ ) of 15 items was in a range  $r$  count  $>$   $r$  table ( $r$  table = 0.271). There was only one  $R$ -value that was not valid because  $r$  XY  $<$   $r$  table about where you found out about information postpartum COVID-19 positive maternal care. The reliability test showed that Cronbach's alpha score was 0.820, which was more significant than 0.6 and was reliable. Limitations: 1) Items on invalid knowledge instruments are removed; there is no substitute for the same substance; 2 experts do not carry out) instrument development, and content validity is not carried out. 3) the number of samples for construct validity is limited.

## 3. Results and Discussion

The respondents' characteristic distribution was listed based on age, gender, semester, school origin, specialization in maternity subjects, and having heard of postpartum maternal care for COVID-19 in the media. Information can be seen in Table 1 of 2020 ( $n = 57$ ) as follows:

Table 1: Frequency Distribution of Nursing Student Characteristics

Variable	Amount	Percentage (%)
Age		
<18-19 years old	6	10.5
19-20 years old	38	66.7
> 20 years old	13	22.8
Gender		
Male	3	5.3
Female	54	94.7
Semester		
3	36	63.2
5	21	36.8
School Origin		
SMK	28	49.1
SMA / IPA	17	29.8
SMA / IPS	12	21.1
Specialization in Maternity Nursing		
Yes	45	78.9
No	12	21.1
Heard of postpartum maternal nursing with COVID-19 on social media		
Yes	38	66.7
No	19	33.3
Knowledge		
Less	18	31.6
Enough	36	63.2
Good	18	5.3

Table 2: Students' Knowledge about Positive COVID--19 Postpartum Mothers

No	Question	Right		Wrong	
		n	%	n	%
1	What is the postpartum period?	33	57.89	24	42.11
2	What causes postpartum mothers to experience a maturation crisis in their role as mothers in the COVID-19 pandemic?	47	82.46	10	17.54
3	What are the early symptoms of transmission of the COVID--19 viruses in postpartum mothers?	21	36.84	36	61.16
4	How can a positive COVID-19 postpartum mother care for her baby, such as bathing, holding, or giving breast milk?	48	84.21	9	15.79
5	What should a nurse do if a mother who is positive for COVID-19 decides to take care of her baby herself?	35	61.40	22	38.60
6	How can the virus transmit from a cheerful COVID-19 pregnant woman to her fetus or baby during pregnancy or childbirth?	15	26.32	42	73.68

7	Is COVID-19 infection found in newborns?	13	22.81	44	77.19
8	Can a mother who has COVID-19 breastfeed her baby?	26	45.61	31	54.39
9	As a nurse, what is your role if a cheerful mother with COVID-19 keeps close contact and gives her breast milk exclusively?	3	5.26	54	94.74
10	If you handle a newborn with skin-to-skin contact, what should you do?	48	84.21	9	15.79
11	The mother is in a very unhealthy condition to breastfeed the baby due to COVID-19 or other complications. What should the nurse do?	33	57.89	24	42.11
12	What is the role of nurses in postpartum mothers to prevent complications?	47	82.46	10	17.54
13	When postpartum mothers go home, what do you recommend about the SWAB examination?	45	78.95	12	21.05
14	Are all babies born to mothers with PDP or confirmed COVID-19 checked for COVID-19?	47	82.46	10	17.54
15	Is breast milk given as expressed breast milk, following transmission prevention measures?	11	19.30	46	80.70

Table 3: Students' Knowledge of Characteristic Data

Variables	Knowledge					
	Good		Enough		Less	
	n	%	n	%	n	%
Age						
<18-19 years old	0	0	5	83.3	1	16.7
19-20 years old	3	7.9	23	60.5	12	31.6
> 20 years old	0	0	8	61.5	5	38.5
Gender						
Male	0	0	2	0.35	1	33.3
Female	3	5.6	34	59.0	17	31.5
Semester						
3	1	2.8	24	66.7	11	30.6
5	2	9.5	12	57.1	7	33.3
School Origin						
SMK	2	7.1	18	64.3	8	28.6
SMA / IPA	0	0	12	70.6	5	29.5
SMA / IPS	1	8.3	6	50	5	41.7

Specialization in							
Maternity							
Nursing							
Yes	2	4.4	31	68.9	12	26.7	
No	1	8.3	5	41.7	6	50.0	
Heard of							
postpartum							
maternal							
nursing with							
COVID-19 on							
social media							
Yes	2	5.3	26	68.4	10	26.3	
No	1	5.3	10	52.6	8	42.1	

The selection of characteristic variables asked of respondents is adjusted from previous research, which attaches characteristic data based on age, gender, college/school origin, and year of study/level of education, intrinsic factors. In contrast, extrinsic factors are information from social media (Mudatsir et al., 2020; Silalahi et al., 2013).

The results showed that most students were at most 19-20 years old with good knowledge, 66.7%. Ages 19-20 years old are the productive age in receiving knowledge. Students are dominated by women with good knowledge, 5.6%, from vocational schools with good knowledge, 7.1%. Based on data from the Indonesian Internet Service Providers Association (APJI) in 2017, of about 143.26 million internet users, 49.52% are dominated by millennials, ranging in age from 19 to 34 years (Syakurah & Moudy, 2020). So, this is in line with the majority of research respondents, namely 20 years old dominated millennials.

Student knowledge is lacking about providing positive education for COVID-19 mothers who breastfeed, 94.74% how to breastfeed as much as 80.7% infected with COVID-19 from mother to baby 77.9%, The findings of this study indicate that knowledge is less than optimal about the care of positive postpartum mothers for COVID-19. The results of Hutahaean's research about the knowledge of nurse students on preventing COVID-19 infection showed that nurses have good knowledge, 54.9%, and less knowledge, 45.1% (Hutahaean et al., 2020). This indicates that students need to know about positive maternal care for COVID-19 so they can carry out nursing care well in the hospital.

According to (Silalahi et al., 2013), breastfeeding is a joint decision between health workers, mothers, and families. There are three options for breastfeeding babies born to mothers with suspected and confirmed COVID-19 (depending on the clinical condition of the mother). The first choice is in the clinical condition of the mother being severe so that the mother does not allow expressing breast milk and there are adequate health facilities. The literature study conducted by Yang et al. through a review of 14 studies found that Health students only had an average score on breastfeeding attitudes and had limited knowledge, especially regarding breastfeeding assessment and management (Hutahaean et al., 2020). Families and health workers choose to prevent the risk of transmission by temporarily separating the mother and baby. The nutrient of choice is donor breast milk or formula. The mother can keep pumping to maintain milk production but discard it until the mother is declared cured. The second option is where the clinical condition of the mother is mild/moderate. Families and health workers choose to reduce the risk of transmission and maintain the closeness of mother and baby. The choice of nutrition is expressed in breast milk. The mother wears a mask while expressing herself. Mothers wash their hands with soap and water for at least 20 seconds before expressing themselves (discipline in maintaining hand hygiene). The mother must clean the pump and all equipment that comes in contact with breast milk and the container after every occasion (according to factory manufacturing). Dairy milk is given by health workers or families who do not suffer from COVID-19. Pumps and bottles of breast milk are not shared. Breastfeeding bottles are stored separately from non-COVID-19 patients. In the third option, in clinical conditions where the mother is asymptomatic/mild and/or facilities - limited infrastructure or does not allow separate care (Pereira et al., 2020), the

mother must clean the pump and all equipment that comes in contact with breast milk and the container after every occasion (according to factory manufacturing). Dairy milk is given by health workers or families who do not suffer from -COVID-19. Pumps and bottles of breast milk are not shared. Breastfeeding bottles are stored separately from non-COVID-19 patients. In the third option, families and health workers accept the risk of contracting and reject the temporary separation of mother and baby.

Women generally have a better awareness of seeking formal and informal information. The amount of information obtained affects the level of knowledge. Women are psychologically more motivated and diligent in learning and working than men. This is what makes the academic achievement of women better than men. Research conducted at the University of Hertfordshire, England, showed that the concentration level of women was better than that of men (Fitriyanti, 2017). A better concentration level will make the information obtained by a person easier for someone to remember and understand. This causes the level of knowledge in women to be better than in men.

Students are actively studying or learning about positive COVID-19 postpartum care from several information and official government websites (Zhong et al., 2020); respondents who had tertiary education/academy in this study were only 52.6%, the rest were high school or equivalent at 46.4%, and 1.1% had less education. The cognitive process uses a procedure to solve problems (Soekidjo, 2010). Knowledge is influenced by a person's experience and the environment, which can then be expressed and believed to give rise to motivation. Occupation and educational/occupational background were found to be associated with the level of knowledge of positive COVID-19 postpartum maternal care. Individuals with an excellent educational background will try to increase their knowledge by accessing information about the COVID-19 infection through social media, which is the news source most accessed by nearly 80% of respondents COVID-19, such as WhatsApp, Line, Instagram, and Facebook. According to (Riskasdas, 2018), social media is the main reason for the millennial generation accessing the internet, which is 83.23%, while getting information/news is 68.01%, and for entertainment, it is 46.81% (Budiati et al., 2018). This causes COVID-19 to become a worldwide phenomenon because social media access occurs every second, spreading easily and quickly. Assessment of the second active component is an effort to avoid COVID-19; this supports the adaptation theory, which states that a good level of knowledge can encourage someone to take suitable action, too (Silalahi et al., 2013).

The gender variable statistical test results with good knowledge show that women are better than men. Women are psychologically more motivated and diligent in studying and working than men, which makes the academic achievement of women better than men.

The result of the variable statistical test in semester 5 had better knowledge than in semester 3, which is associated with good knowledge. Semester 5 or longer gets more material than semester three because it affects knowledge, insight, and understanding of information obtained based on experience. Someone's experience will affect the mindset of an action to be taken. The results showed that many students with a high level of knowledge would easily understand that there is a relationship to knowledge, which is in line with the research, that there is a significant relationship between the level of knowledge about postpartum mothers with COVID-19.

The results of the statistical test of variables from schools at most vocational schools, with specialization in maternity nursing, and obtaining information through social media are associated with good knowledge; this is related to the results of research by (Peng et al., 2020) showing Chinese students' knowledge related to COVID-19 with knowledge results was good. The knowledge data of students in Pakistan related to knowledge in preventing COVID-19 was good knowledge (Budiati et al., 2018). This is similar to the knowledge data of medical students in India who have poor knowledge regarding COVID-19. In contrast to the results of research on students in the Philippines, knowledge related to the prevention of COVID-19 was obtained with good knowledge results. Knowledge related to COVID-19 was obtained by students from social media, the internet, television, the Ministry of Health, WHO, and friend information (Mas' udi & Winanti, 2020). This article was written by the Indonesian government and the Ministry of Health to take

significant action to provide information to increase knowledge related to education on the prevention of transmission of the COVID-19 virus and the dangers of COVID-19 in the community through social media, newspapers, and television. The government educates the public regarding health protocols when meeting other people, such as always wearing a mask, maintaining a minimum distance of 1 meter, and constantly washing hands using soap (Kemenkes RI, 2018).

Providing health education is one of the steps to improve the readiness of the community, especially students, to face problems during a pandemic; this will affect knowledge and attitudes. Knowledge will increase and encourage a positive attitude (Guan et al., 2020). The knowledge that must be given to students regarding caring for positive postpartum mothers with COVID-19 or PDP is 1. Care must be carried out in a particular / isolation room for the mother and the baby, both of whom must be separated; 2. If the mother decides to take care of her baby, it is confirmed that the mother has received complete information and understands the potential risks; 3. Mothers and babies must be isolated in one room with suite facilities while being treated at the hospital; 4. Mothers must use masks during the care of their babies and perform hand hygiene before and after breastfeeding contact with the baby; 5. Postpartum mothers should always wear masks during healthcare facilities activities; 6. The discharge of postpartum mothers must follow the recommendations for the discharge of COVID-19 patients (ICMR, n.d.; Jardine et al., 2021).

#### 4. Conclusion

The results of the study and discussion of the level of student knowledge about positive COVID-19 postpartum maternal care stated that the number of respondents was 57 people, the contents of the questionnaire were based on characteristics consisting of age, gender, semester, school origin, specialization in maternity teaching, having heard of postpartum care, positive COVID-19 in information media and questionnaires about good, sufficient and insufficient knowledge. Most older students, 19-20, have sufficient knowledge, namely 60.5%, about the care of COVID-19-positive postpartum mothers. Student education level will affect students' knowledge of positive COVID-19 postpartum maternity nursing.

#### Ethics approval and consent to participate

Ethical Approval LB.02.01/I/KE/00/524/2020

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