Analysis Knowledge, Attitude, and Practice of COVID-19 Among the Nursing Staffs In Mataram City, Indonesia

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ABSTRACT

Introduction. Coronavirus (Covid-19) alarge family of viruses transmitting between animals and humans that cause illness ranging from the common cold to more severe diseases such as respiratory syndrome and severe acute respiratory syndrome. Furthermore, it is an emerging pathogen with pandemic potential ravaging the world, includingthe Indonesian health system. The shock is exacerbated because health workers have limited knowledge about COVID-19, and therefore many are victims, especially health workers, which includes nurses. This study aims to determine the relationship of knowledge, attitude, and practice of nurses in the prevention of COVID-19 in the city of Mataram

Methods. This study is a descriptive exploratory approach with a cross-sectional survey conducted on an online platform managed by Google Form. The number of respondents was 305.

Results: There was a relationship between knowledge and attitudes of the nurse with a p-value of 0.000, there is a significant relationship between knowledge and preventive practices with a p-value of 0.006, there is no relationship between attitudes with COVID-19 prevention practices with a p-value of 0.094.

Conclusion: Good knowledge influences the nurses in carrying out prevention measures for COVID -19, less in the prevention practiceswhen not supported by adequate facilities and infrastructure

Keywords

COVID-19, Coronavirus Disease-19, Analysis Knowledge and Attitude

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Introduction

The case of Severe acute respiratory syndrome coronavirus 2 (SARS CoV-2) was first reported on December 31, 2019, which was confirmed in China and other countries. Transmission of this virus is limited from person to person (close contacts and health care workers), and occurs through droplets, contact, and contaminated objects. Over time, the number of victims continues to grow. (The COVID-19 Risk Communication Package for Health Care Facilities. WHO, 2020). Based on data until Saturday (11/4/2020), the total positive cases of COVID-19 were 4,241 people, of which 373 died while 359 people were cured, which means that the death rate or CFR (case fertility rate) of the coronavirus in Indonesia is currently at 8.79%, which is higher than the global figure of 5.97% set by The Johns Hopkins University Research Center.

Nurses are at the forefront of handling the COVID-19cases, which is currently endemic in several countries including Indonesia, and they are willing to risk their lives and put the patients first. Meanwhile, according to figures published on JAMA Network Open, an online medical site of infected health workers in China,account for 3.8% of total COVID-19 cases and records five deaths from health workers. There were 60% of health workers infected during the pandemic in Wuhan, China. In Italy alone, the infected health personnel was about 2,689, which was 8% of the total cases. Based on monitoring data from Indonesian, nurses were affected by COVID-19 on 26 April 2020, data on the number of nurses that died were 17, 4 people are without symptoms, 521 people under surveillance, 42 patients under surveillance, 46 positive COVID-19 cases are being treated, while 56 people are being treated and only2 people have recovered (Data Monitoring COVID Affected nurse, 2020). According to the Indonesian Nurses Association's task force, 31 nurses are being monitored with the status of individuals, resulting in less than optimal quality of health services.

Standard recommendations for preventing the transmission of infection are regular hand washing, coughing and sneezing, and avoiding contact with other people, especially those with symptoms of a cold cough. Also, the implementation of infection prevention and control (IPC) in health facilities. (PPNI & HIPPI, 2020) . To ensure ultimate success, people's compliance with these control measures is very important, which is largely influenced by their knowledge, attitudes, and practices (KAP) towards COVID-19. Zhang's 2020 study shows that high knowledge of nurses can make changes in optimistic attitudes in facing COVID 19. This optimistic change in attitude help improves nurses' behavior by following the COVID treatment protocol 19 (Zhong et al ., 2020).

Methods

A cross-sectional with an observational analytic cross-sectional was used in this study. Samples are nurses in the city of Mataram that are willing to fill out a questionnaire. Respondents represented several hospitals in Mataram City

(8 private and government hospitals) Puskesmas and independent clinics that admit COVID-19 patients (ODP/people in monitoring, PDP/patient under surveillance, and positive). The questionnaire consists of; Demographic data, 10 questions about knowledge, 10 questions about attitudes, and 10 questions about COVID-19 prevention practices. The research tool was a questionnaire intended for 305 people via the Google Form platform. This activity lasts for a month, and the data analysis was performed in two ways, namely by univariate analysis and bivariate analysis. The statistical test used is the Chi-Square (X2) test. The Chi-Square test is used because the purpose of this study is to find a relationship between two variables.

Results

Characteristics of respondents include age, gender, education, and place of work with a total sample of 305 nurses, shown in table 1:

Table 1: Characteristics of Respondents include age, gender, education, and workplace of COVID 19 nurses in Mataram City in 2020.

	Frequency	%
Nurse Knowledge		
Well	304	99.7
Enough	1	0.3
Less	0	0
total	305	100
Attitude of Nurse		
Positive	303	99.3
	2	0.7
total	305	100
Preventive Practices		
Well	269	88.2
Not good	36	11.8
total	305	100

Data source: primary data

From table 1 above, it was explained that the distribution of the number of samples based on age shows that the Adult category has the highest percentage of 216 (70.8%), the most respondents are female, of about 172 people (56.4%), while 127 responded (41.6%) for the education level of nurses in Mataram City, which is dominated by Nurse (profession), about 179 (58.7%) respondents work in the hospital.

Table 2. Analysis of the Relationship between Knowledge and Attitudes of Nurses in practice prevention of COVID 19 in Mataram City, 2020

Q: What Knowledge	Attitude				Total		OR (95%CI)	*p-Value*	*p-Value*
	Positive		Negative						
	n	%	n		N	%			
Well	303	99.3	1	0.35	304	99.7	0.003 (1,002-1,225)	0,000	0,000
Enough	0	0	1	0.3	1	0.3			
Total	303	99.3	2	0.7	305	100			

Source: primary data

Table 2 shows that one respondent (0.35%) has a negative attitude with good knowledge. Based on the analysis of cross-tabulation between p What Knowledge was acquired with the attitude of nurses in the prevention COVID 19 have the p-value of 0.000, which means there is a significant relationship between knowledge and attitude of nurses in the prevention of COVID 19 and the value of OR = 0.003, which means a good knowledge has a chance of 0,003 times to influence nurses' attitudes in preventing COVID 19.

Table 3. Analysis of Knowledge Relationship with COVID 19 prevention practices in Mataram City, 2020

Knowledge	Preventive Practices				Total		OR (95%CI)	*p-Value*	*p-Value*
	Well		Less						
	n	%	n	%	N	%			
Well	269	88.2	35	11.5	304	99.7	0.115 (0.084-0.157)	0.006	0,000
Enough	0	0	1	0.3	1	0.3			
Total	303	99.3	2	0.7	305	100			

Source: primary data

In table 3 above, it is known that 35 respondents (11.5%) have good knowledge with fewer prevention practices. Based on analysis of cross-tabulation between p, What Knowledge with COVID 19 prevention practices shows a p-value of 0.006, which means that there is a significant relationship between p, What Knowledge with prevention practices of COVID 19 and the value of OR = 0.115, which means that good knowledge has 0.115 times the chance of influencing nurses' practice in preventing COVID 19.

Table 4. Analysis of Knowledge Relationship with COVID 19 prevention practices in Mataram City, 2020

Attitude	Preventive Practices				Total		OR (95%CI)	*p-Value*	*p-Value*
	Well		Less						
	n	%	n	%	N	%			
Positive	268	87.9	35	11.5	303	99.3	0.231 (0.056-0,956)	0.094	0,000
Negative	1	0.3	1	0.3	2	0.7			
Total	303	99.3	2	0.7	305	100			

Source: primary data

Table 4 above shows that 35 respondents (11.5%) have positive attitudes with less prevention practices. Based on the cross-tabulation analysis between attitudes and prevention practices of COVID 19, the p-value is 0.094, which means that there is no relationship between attitudes and prevention practices of COVID 19 and the OR = 0.231 means attitudes have a probability of 0.231 chance of not influencing the practice of preventing COVID 19.

Discussion

Based on the results, most of the respondents with a total of 304 (99.7%) had a good level of knowledge. The results of this study are in line with research conducted by Zhou, M, et al (2020), from a survey involving 1357 health workers in 10 hospitals in Henan China, 89% of health workers had good knowledge about COVID-19 (Zhong et al. 2020).

Most of the respondents in this study were trainedNurses (41.6%). The results showed that the higher the level of education, the better the knowledge they had. Good knowledge is influenced by education level (Giao, H. An,

P.L. Han, 2020) in which higher education is equivalent to higher knowledge (Wahed et al., 2020).

COVID-19 or coronavirus is a newly discovered virus that attacks the respiratory system and is very contagious, and currently, it is described by various sources of information, both mass media and online websites. This is also in line with the results of research conducted by Shi, Y, et al (2020) according to which 89.51% of respondents said that they had sufficient knowledge of the COVID-19 epidemic from various media such as social media, the internet, television, and newspapers. (Shi, Y. Wang, J. et al 2020). This is understandable, because media coverage reviews the pandemic study from different angles, from social, economic, political, and health aspects. These data reflect that health workers occasionally try to update the information.

Based on the results, most of the respondents that had a positive attitude towards Covid-19 were 303 (099.3%). This result is in line with research conducted by Hussain et al., 2020, in which 80% of respondents had a positive attitude towards Covid-19. Knowledge greatly influences attitude, the higher the knowledge, the better the attitude.

Health workers that are at the forefront of dealing directly with patients have a positive attitude, motivation, and high optimism, this is related to government attention and policies (Zhong et al., 2020) This also applies to Indonesia in general and the city of Mataram in particular, the city government. Mataram offers its full attention and optimal support in dealing with the COVID-19 pandemic.

Good prevention practice is based on the results of the highest prevention practice. This result is in linewith the research conducted by (Dakhar et al., 2020), in India that health workers have good practices related to COVID-19. Environmental factors are a dominant factor in a person's behavior. For preventive practices carried out by health workers, it is very much influenced by the availability of facilities and infrastructure. Covid-19 is a disease caused by a virus that spreads very quickly, to prevent the spread, it must be supported by standardized personal protectiveequipments (PPE), which helps health workers, for example, nurses, to prevent the spread of the virus optimally.

The age of the respondents, which varies from adolescence, adulthood to the elderly, also affect the practice of preventing COVID-19, where age describes the psychological or mental aspects of a person's thinking (Gunawan, I. & Mudayana, 2016).

The relationship between knowledge and the attitudes of nurses in preventing COVID-19. The results of statistical tests showed a p-value of 0.000, which means that there is a significant relationship between knowledge and attitudes of nurses in preventing COVID-19 and the value of OR = 0.003. These data is in line with research by Giao, H, et al., 2020, (Ajilore et al., 2017), Zhang et al., 2020, Bhagavathula et al., 2020 and Saqlain, M, et al., 2020; which states that good knowledge correlates with a positive attitude. Knowledge is a prerequisite for building preventive beliefs, forming positive attitudes, and promoting positive behavior, cognition, and individual attitudes towards a disease that to some extent influence their strategies and behavioral adjustment (Zhong et al., 2020). Good knowledge correlates with a positive attitude. This study also

reported that knowledge directly influences attitudes, and the greater the knowledge of health workers, the more positive their attitude towards fighting the Coronavirus.

Theoretically, attitude is a behavioral pattern, tendency, or anticipatory readiness, a predisposition to adapt to social situations. In simple terms, attitude is a response to controlled social situations. According to researchers based on the results obtained, it shows there are a relationship and conformity between knowledge and attitudes of nurses, the better and higher a person's knowledge,the better the attitude towards influencing something. Health workers or nurses have good knowledge about COVID-19, and how it spreads, therefore the knowledge influences the attitude of nurses in preventing the spread of COVID-19.

The relationship of knowledge with COVID-19 prevention practices. The statistical test results showed a p-value of 0.006, which means that there is a significant relationship between knowledge and the practice of preventing COVID-19 and the value of OR = 0.12. Good knowledge about COVID-19 influences nurses in preventing the spread of COVID-19. Similarly, to prevent COVID-19, not only is it influenced by knowledge factors, but many factors are interrelated, including work experience, working time, job category, and other factors (Zhong et al., 2020)

The relationship between attitudes and preventive practices. The results of statistical tests showed a p-value of 0.094, which means that there is no relationship between attitudes and prevention practices of COVID-19 and OR = 0.231. One of the factors that influence attitudes is the environment, and the factors are the dominant color in a person's behavior. COVID-19 is a disease that is generally mild, especially in children and young adults. However, these infections cause serious illness: about 1 in 5 people affectedrequired hospital treatment.

Diligently washing of hands, and covering of nose and mouth when coughing and sneezing, areways of protecting ourselves, and the people we love. Besides, keeping up to date with information and following any advice including traveling, movement, and meet restrictions that apply. In this study, attitudes and prevention practices have no relationship, this is due to a positive attitude and the desire to carry out preventive practices when they are not supported by adequate facilities and infrastructure, of course, it will not work well. Moreover, Covid-19 is a disease that spreads very quickly.

Health workers currently need adequate and standardized personnel protective equipmentto be able to fight Covid-19 and help patients in the healing process. However, in reality, not all regions have adequate personnel protective equipment, especially at community health centers in the district. In the city of Mataram itself, personnel protective equipment is lacking, therefore the attitude of nurses to carry out the practice of preventing the spread of Covid-19 is very much influenced by the completeness of facilities and infrastructure.

Conclusion

Most of the health workers have a good level of knowledge which is practiced with good prevention the respondents

have a nursing background. The relationship between knowledge and attitudes of nurses, and knowledge with prevention practices of COVID-19, both have a significant relationship, whereas between attitudes and COVID-19 prevention practices there is no significant relationship.

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