The Relationship Between Knowledge, Attitude, and Readiness of Academic Community in COVID-19 Spread Prevention: Batari Toja Nursing Academy, Watampone

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Abstract---*COVID-19 has been a pandemic disaster since 2019. Based on the data of the COVID-19 spread from the COVID-19 Handling Task Force in early July 2020, South Sulawesi Province was included in the area with the highest number of cases. The increase of cases of COVID-19 mortality and morbidity is because COVID-19 transmission is predicted from human to human. In anticipating and reducing the risk of being transmitted COVID-19, every Individual needs to understand the COVID-19 transmission process and its impacts when being infected for themselves or for people who are vulnerable to severe health problems due to COVID-19. Purpose: This study aims to determine the relationship between knowledge, attitude, and the readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone. The type of study was an analytical survey using a cross-sectional study design. The number of samples in this study was 30 respondents selected using a purposive sampling technique. Furthermore, data were collected using a questionnaire. Data were then processed by utilizing SPSS v.22 with univariate and bivariate analyses and the Chi-square statistical test, then, presented in the form of frequency distribution tables. This study showed that, from the result of the Chi-square test, the relationship between knowledge and readiness was indicated with a p-value of 0.003 < (α = 0.05) while the relationship between attitude and readiness was indicated with a p-value of 0.019 < (α = 0.05) meaning that there is a relationship between knowledge along with attitude and the readiness of the academic community related to prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone. Suggestion: This study is expected to be input and recommendation to the Top Manager in improving the readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone.*
Keywords---*attitude, disaster, knowledge, pandemic, readiness.*

Introduction

COVID-19 has been a pandemic disaster since 2019. Around 207 countries in the world have been affected by this pandemic. Indonesia is no exception. The first discovery of the COVID-19 cases in Indonesia occurred in early March 2020. Until the end of June, the number of recorded cases has reached 57,770 in which the number of deaths was 2,934. In addition to the significantly increased prevalence of the COVID-19 cases, its distribution area is also getting larger. At first, it started at Depok at the beginning of March. Currently, it has spread in 34 provinces and 321 regencies (Hadi, 2020).

Based on the data of the COVID-19 spread from the COVID-19 Handling Task Force in early July 2020, South Sulawesi Province was included in the area with the highest number of cases after West Java and Jakarta with a total of 5,084 cases (SATGAS, 2020). It is later explained that the increase of cases of COVID-19 mortality and morbidity is because COVID-19 transmission is predicted from human to human. It was based on the incidence of transmission to health care workers treating COVID-19 patients. The other was the evidence of transmission outside China from a person coming from Shanghai, China to Germany. Furthermore, those events were followed by the discovery of the positive COVID-19 case in a person working in the office. In the report of this case, it was said that transmission occurred at the stage of not experiencing symptoms (asymptomatic) or still in the incubation period. Another report supporting human-to-human transmission is a report of 9 cases of direct human-to-human transmission outside China in which those people only close contact with people who do not have any travel history. This transmission occurred generally through droplets and contact with viruses then the virus can enter through the open mucosa. An analysis attempted to measure the rate of transmission based on the incubation period, symptoms, and duration of the isolated COVID-19 patients. The result of the analysis indicated that 1 patient can transmit to about 3 people around him. However, the possibility of transmission during the incubation period can cause the contact period of the patient to the people around him becoming longer so that the risk of the number of transmitted contacts from 1 patient might be greater (Handayani *et al.*, 2020; Fang *et al.,* 2020; Lancet, 2020; Horton, 2020).

Recently, the Indonesian Government has issued a policy to loosen previous policies related to regulation for overcoming the COVID-19. One element of society that is given regulatory looseness is higher education. Online learning with curriculum adjustments as needed in each area concerned (Aslan, 2017; 2019; 2016; Aslan *et al.,* 2020; Aslan & Wahyudin, 2020). Through the Ministry of Education and Culture Circular Letter No. 3/2020 concerning COVID-19 prevention in the educational unit, the higher education institutions must prioritize implementing online learning. However, if online learning cannot be carried out, those higher educations may carry out priority learning activities such as research in the laboratory and the practicum by still obeying strict health protocols.

This certainly increases the risk of COVID-19 spread. In anticipating and reducing the risk of being transmitted COVID-19, every Individual needs to understand the COVID-19 transmission process and its impacts when being infected for themselves or for people who are vulnerable to severe health problems due to COVID-19. Good public knowledge towards the forms of the COVID-19 transmission process and the characteristics of COVID-19 disease will help people to behave based on the prevention rules of COVID-19 transmission. Also, people who have sufficient knowledge and think based on scientific evidence will be smarter in responding to this COVID-19 pandemic. Knowledge related to the symptoms and people's condition stages when being transmitted the COVID-19 disease will contribute to self-awareness to report and check their health or their family members who are suspected of being met the criteria of being transmitted COVID-19 based on the guidelines from the Ministry of the Health of the Republic of Indonesia, namely ODP (stand for *Orang Dalam Pemantauan* or in English "Monitored People"), PDP (stand for *Pasien Dalam Pengawasan* or in English "Supervised Patients"), OTG (stand for *Orang Tanpa Gejala* or in English "Asymptomatic People"), and close contact (Unisba, 2020;).

Based on the phenomenon discussed above, the researcher is interested to find out the relationship between knowledge along with attitude and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone.

Methods

The employed research method in this study was an analytical survey using a cross-sectional study design. Based on the purpose, this study is categorized as correlational research because it aims to determine the reciprocal relationship between the independent variable and the dependent variable. The samples in this study were the members of the academic community of Batari Toja Nursing Academy, Watampone. The number of samples was 30 respondents selected using the purposive sampling technique. The samples consisted of administrators and permanent lectures of Batari Toja Nursing Academy, Watampone. Furthermore, data were analyzed using the Chi-square test by utilizing the SPSS v.22 program.

The data collection instrument in this study was a questionnaire. The collected data included primary data and secondary data. Primary data were obtained directly from respondents through filling out questionnaire sheets. Secondary data were obtained from the Health Office of Bone Regency which then provided data of a patient visit registration book in Ulaweng Health Center.

The collected data was then inputted to a computer and analyzed using the SPSS v.22 program. Data analysis was carried out descriptively and analytically. Descriptively, the data was presented in the form of a frequency

distribution table accompanied by an explanation and percentage. Meanwhile, in analyzing the relationship between knowledge along with attitude and readiness in the prevention of COVID-19 spread, it applied the Chi-square test.

Results

Table 1
Distribution of Gender of Respondents from the Academic Community of
Batari Toja Nursing Academy, Watampone

Gender	Frequency (n)	Percentage (%)
Male	11	36.7
Female	19	63.3
Total	30	100

Source: Primary Data, 2020

Based on table 1, it can be seen that, from 30 respondents, 11 (36.7%) of them are male, while 19 (63.3%) of them are female.

Table 2
Distribution of Knowledge of Respondents from the Academic Community of
Batari Toja Nursing Academy, Watampone

Knowledge	Frequency (n)	Percentage (%)
Less	5	16.7
Sufficient	25	83.3
Total	30	100

Source: Primary Data, 2020

Based on table 2, it can be seen that, from 30 respondents, 5 (16.7%) of them have less knowledge, while 25 (83%) of them have sufficient knowledge.

Table 3
Distribution of Attitude of Respondents from the Academic Community of
Batari Toja Nursing Academy, Watampone

Attitude	Frequency (n)	Percentage (%)
Negative	4	13.3
Positive	26	86.7
Total	30	100

Source: Primary Data, 2020

Based on table 3, it can be seen that, from 30 respondents, 4 (13.3%) of them have a negative attitude, while 26 (86.7%) of them have a positive attitude.

Table 4
Distribution of Readiness of Respondents from the Academic Community of
Batari Toja Nursing Academy, Watampone

Readiness	Frequency (n)	Percentage (%)
Not Ready	8	26.7
Ready	22	73.3

	Total	30	100

Based on table 4, it can be seen that, from 30 respondents, 8 (26.7%) of them have not been ready yet, while 22 (73.3%) of them have been ready.

Table 5
Chi-Square Test of Relationship between Knowledge and Readiness of the Academic Community in the Prevention of COVID-19 Spread in Batari Toja Nursing Academy, Watampone

Knowledge	Readiness						
	Not Ready		Ready		Total		
	N	%	n	%	n	%	*p*-value
Less	4	50	1	4.5	5	100.0	
Sufficient	4	50	21	95.5	25	100.0	0.003
Total	8	100	22	100	30	100.0	

Based on Table 5, it shows that 5 respondents who have less knowledge consist of 4 (50%) respondents who have not been ready and 1 (4.5%) respondents who have ready. Meanwhile, 25 respondents who have sufficient knowledge consist of 4 (50%) respondents who have not been ready and 21 (95.5%) respondents who have been ready. Based on the results of the chi-square statistical test between the variable of knowledge and the variable of readiness of the academic community in the prevention of COVID-19 spread, it obtains *p*-value of $0.003 < (\alpha = 0.05)$ meaning there is a relationship between knowledge and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone.

Table 6
Chi-Square Test of Relationship between Attitude and Readiness of the Academic Community in the Prevention of COVID-19 Spread Batari Toja Nursing Academy, Watampone

Attitude	Readiness						
	Not Ready		Ready		Total		
	N	%	n	%	n	%	*p*-value
Negative	3	37.5	1	4.5	4	100.0	
Positive	5	62.5	21	95.5	26	100.0	0.019
Total	8	100	22	100	30	100.0	

Based on Table 6, it shows that 4 respondents who have a negative attitude consist of 3 (37.5%) respondents who have not been ready and 1 (4.5%) respondents who have ready. Meanwhile, 26 respondents who have a positive attitude consist of 5 (62.5%) respondents who have not been ready and 21 (95.5%) respondents who have been ready. Based on the results of the chi-square statistical test between the variable of attitude and the variable of readiness of the academic community in the prevention of COVID-19 spread, it obtains *p*-value of $0.019 < (\alpha = 0.05)$ meaning there is a relationship between attitude and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone.

Discussion

Relationship between Knowledge and Readiness of the Academic Community in the Prevention of COVID-19 Spread. The knowledge in this study means everything that is known by members of the academic community about preventing the COVID-19 spread. The results showed that, from 30 respondents, 25 (83.3%) respondents had sufficient knowledge about the prevention and spread of COVID-19. This was because, on average, those respondents had a high education level and followed the information related to COVID-19 through the internet. Meanwhile, 5 (16.7%) respondents had less knowledge about the prevention and spread of COVID-19. This was because those respondents did not follow the information and had inappropriate educational qualifications. These results are consistent with the previous study that social media is the most common source of information about COVID-19 and the factors of age and profession are related to the knowledge possessed about COVID-19 (Bhagavathula *et al.*, 2020; Dashraath *et al.,* 2020; Lewnard & Lo, 2020).

This study also indicated that, from the result of the chi-square statistical test between the variable of knowledge and the variable of readiness of the academic community in the prevention of COVID-19 spread, it obtained *p*-value of $0.003 < (\alpha = 0.05)$ meaning that the alternative hypothesis was accepted indicating that there is a relationship between knowledge and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone. This is clear and apprehensible because, in general, the majority of respondents are highly educated so that they are aware of the importance of health.

This result is in line with a study conducted by Cvetković et al. (2020) that, by applying the Chi-square test, he found out that there is a relationship between knowledge and education level in which respondents who have higher education level tend to be more familiar with the COVID-19 transmission. Furthermore, respondents who have secondary education level may make plans to stay at home for isolation or independent quarantine. Respondents who have a bachelor's degree avoid contact by not hugging and shaking hands with family members and relatives and using disinfectants to clothing before using it. Respondents who have a master's / doctoral degree avoid handshaking and maintain a distance of 2 meters as a form of alertness.

This study is also in line with the results of a survey conducted by Kebede *et al.*, 2020) that, from 247 respondents, 205 (83.0%) respondents knew the clinical symptoms of COVID-19, 117 (72.0%) respondents knew that the elderly who have chronic diseases have a higher risk of death when being transmitted COVID-19, 234 (95.1%) respondents knew that the COVID-19 virus is spread through droplets of infected people, while 77 (31.2%) respondents knew about the possibility of COVID-19 transmission from infected people with no symptoms. Overall, the respondents have sufficient knowledge to control the COVID-19 spread. Washing hands frequently and avoiding handshake are recommendations to prevent COVID-19 transmission.

Based on the researcher's assumptions, knowledge is closely related to readiness in preventing COVID-19 transmission. Sufficient knowledge of individuals and thinking processes based on reliable sources about the transmission process of COVID-19 and its effect on health will help them not to neglect this COVID-19 pandemic. The knowledge about symptoms of COVID-19 will contribute to breaking the chain of the COVID-19 spread by reporting and checking their health and their family members who are suspected fulfilling the criteria of being transmitted COVID-19 to health facilities.

Relationship between Attitude and Readiness of the Academic Community in the Prevention of COVID-19 Spread. The attitude in this study means the response of the academic community related to the readiness of the academic community members in preventing the COVID-19 spread. The results showed that, from 30 respondents, 26 (86.7%) respondents had a positive attitude about the prevention and spread of COVID-19. This was because those respondents had sufficient knowledge so that they behaved based on the rules suggested by the government. Meanwhile, 4 (13.3%) respondents had a negative attitude about the prevention and spread of COVID-19. This was because those respondents lack exposure to information from reliable sources so that they ignored the dangers that could have been caused by COVID-19.

This study also indicated that, from the result of the chi-square statistical test between the variable of attitude and the variable of readiness of the academic community in the prevention of COVID-19 spread, it obtained *p*-value of $0.019 < (\alpha = 0.05)$ meaning that the alternative hypothesis was accepted indicating that there is a relationship between attitude and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone. This is because the more positive attitude of the individual is, the more aware of the individual will act in preventing the COVID-19 spread.

This study is in line with a study conducted by Ferdous et al. (2020). The title of the study is "Knowledge, Attitudes, and Practices towards COVID-19 Outbreaks in Bangladesh". It is an online-based cross-sectional study with multiple logistic regression analysis. The result indicates that there is a significant relationship between positive

attitudes and COVID-19 prevention practices in Bangladesh with a *p*-value of $0.011 < (\alpha = 0.05)$ by washing hands, wearing masks, and reporting people suspected COVID-19 to authorized health workers.

This result is also in line with a study conducted by Zhong et al. (2020) titled "Knowledge, Attitudes, and Practices towards COVID-19 among Chinese Residents during the Recovery Period from the COVID-19 Outbreak". It is also an online cross-sectional survey using logistic regression analysis. The result indicates that the prevention of the COVID-19 spread was influenced by knowledge and attitude. A positive attitude is (OR:), 75-0.90 with a *p*-value of 0.001 in which the positive attitudes are being optimistic and using a mask when leaving the house and when in the crowd.

Based on the researcher's assumptions, a positive attitude is closely related to readiness in preventing COVID-19 transmission. Being positive by obeying the COVID-19 protocol, i.g. using a mask when leaving the house, keeping a safe distance, and washing hands is a positive attitude in preventing COVID-19 Transmission.

Conclusion

Based on the results of this study about the relationship between knowledge along with attitude and readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone, it indicated that there is a significant relationship between knowledge and readiness. The more sufficient the knowledge of the academic community is, the more ready they will be in preventing the COVID-19 spread. Furthermore, it also indicated that there is a significant relationship between attitudes and readiness. The more positive the attitude of the academic community is, the more ready they will be in preventing the COVID-19 spread in Batari Toja Nursing Academy, Watampone.

Suggestion
This study is expected to be input and recommendation to the Top Manager in improving the readiness of the academic community in the prevention of COVID-19 spread in Batari Toja Nursing Academy, Watampone.

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