

ANALYSIS OF FACTORS OF NURSE COMPLIANCE IN THE APPLICATION OF STANDARD PRECAUTION TO THE PREVENTION OF COVID-19

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Abstract

Corona Virus Disease 2019 (COVID-19) has spread around the world resulting in a very rapid increase in morbidity and can lead to death. Since the beginning of 2020 there has been an increase in the number of cases of COVID-19 virus infection. The ratio of deaths and exposure to COVID-19 for nursing personnel in Indonesia is among the highest compared to other countries. Therefore, efforts are needed to make "Medical Safety and Protection" namely with the application of Standard Precaution. This study aims to find out what factors affect nurse compliance in the implementation of Standard Precaution to prevent COVID-19 transmission. This type of research is correlative quantitative research with a cross-sectional approach. The population in this study was the nurse of the emergency room and the men's internal medicine room Tgk Abdullah Syafi'i Hospital. The sampling technique in this study is a total sampling with the number of nurses as many as 87 people. The results of the study were analyzed univariately and bivariate using Spearman rank statistics and multivariate analysis with logistic regression tests. The results showed that 86.3% of nurses adhered to the implementation of standard precaution in preventing the transmission of Covid-19 Tgk Abdullah Syafi'i Hospital. from the results of bivariate analysis shows there is a significant relationship between Attitude (p value = 0.007), barrier to application of standard precaution (p value = 0.005), Availability of infection prevention facility (p value = 0.000) against the application of standard precaution. The results of multivariate analysis showed that Availability of infection prevention facilities is the most dominant factor in the prevention of covid-19 transmission with an OR value of 12.936. The conclusion is that there is a meaningful relationship between the application of standard transmission of covid-19 in nurses. It is expected to the hospital to pay full attention to the availability of infection prevention facilities in emergency departments and internal medicine rooms.

Keywords: Standard Precaution; Nurse; Compliance; Covid-19

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1. Introduction

The world is struggling with the COVID-19 pandemic. Coronavirus 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). SARS-CoV-2 is a new type of coronavirus that has never been identified before in humans. On December 31, 2019, the WHO China Country Office in Wuhan City reported an unknown case of pneumonia. On January 7, 2020, the Chinese government then announced the cause of the case is a new type of coronavirus. Indonesia ranks 23rd for the number of cases exposed to Covid-19. One of the most affected aspects of this pandemic is the health sector. As the disease spreads, problems in the health field become increasingly visible. Some significant problems are the number of

nurses exposed to the Covid-19 virus, the lack of health facilities, the limited availability of Personal Protective Equipment, especially for health workers (Driggin et. al. 2020).

Despite all the above problems, nurses have an obligation to continue to provide health services to patients. In accordance with the nurse's oath and the applicable nursing code of ethics, nurses should always provide nursing services to patients with due regard to the interests of the community and must provide competent services. In order for health workers (nurses) to continue to provide health services and remain protected and guaranteed safety, efforts are needed to make "Medical Safety and Protection". That is, with the implementation of standard precaution. Compliance with the implementation of Standard

Precaution for health workers (Nurses) can certainly break the chain of transmission of the COVID-19 virus from patients to nurses. However, the implementation of *Standard Precaution* on the ground is still not effectively influenced by several factors, namely: Individual Factors such as knowledge and attitudes about transmission of transmission and perception of risk. Work factors such as obstacles in the application of *Standard Precaution*, for organizational actors such as availability of facilities and infrastructure (Luo et. el. 2018).

This study aims to find out what perception factors affect nurse compliance with the implementation of *Standard Precaution* in the prevention of covid 19 transmission. This research is important because it is expected that nurses can improve compliance in implementing *Standard Precaution* so as to break the chain of transmission of the Covid-19 virus to parawat and other health workers.

2. Method

The type of research used is descriptive quantitative with *cross sectional design*. Research in this *cross sectional* study assesses independent variables and dependent variables, in this study the variables examined are independent variables namely individual factors (X1), Work factors (X2) and organizational factors (X3). with dependent variables namely nurse compliance in the application of *Standard Precaution* (Y1). The study was conducted at Tgk Abdullah Syafi'i Hospital. The subjects in the study were all the nurses who served in the emergency department and internal medicine room. The instruments used in this study are questionnaires consisting of independent variables and dependent variable questionnaires that have been tested for validity and reliability before. The data collection technique that will be done in this study is by circulating questionnaires. The questionnaire to be circulated to respondents contains written statements containing the need for data to identify factors that affect nurse compliance in the implementation of *Standard Precaution* to Covid 19 transmission. The distribution of questionnaire statements from independent variables consists of three parts: (individual factors, occupational factors and organizational factors) and dependent variable questionnaires (nurse compliance behavior in the application of standard vigilance). The results of the study were analyzed univariately and bivariate using *Spearman rank* statistics and multivariate analysis with logistic regression tests.

3. Result and Discussion

From the results of the study showed that of 87 respondents, as many as 12 (13.7%) respondents did not comply with the *Standard Precaution* in preventing Covid 19 Transmission, only 75 respondents (86.3%) were compliant in the

implementation of *Standard Precaution* at Tgk Abdullah Syafi'i Hospital.

Table 1. Distribution of nurse compliance frequency in the application of *Standard Precaution*

Variable	Category	Frequency	%
Implementation of <i>standard precaution</i>	Obedient	75	86.3
	Disobedient	12	13.7

Table 2. Distribution of factors of nurse compliance with the application of *Standard Precautions*

Variable	Category	Frequency	%
Individual factors	Attitude Positive	73	83.9
	Negative	14	16.1
	Total	87	100
Employment factor	Barriers to the implementation of <i>Standard Precaution</i>		
	Tall	19	21.9
	Low	68	78.1
Factor organization	Availability of infection prevention facilities and facilities		
	Complete	71	81.7
	Incomplete	16	18.3
Total		87	100

Table 3. Analysis of attitude relationships, job barriers, availability of availability of infection prevention facilities and facilities with compliance with *Standard Precaution*

Dependent Variables	Independent Variables	P	R
Attitude	Compliance with <i>standard precaution</i>	0.007	0.287**
Barriers to the implementation of <i>standard precaution</i>		0.005	-0.302**
Availability an means of infection prevention facilities		0.000	0.435**

From the results of the study showed that of 87 respondents, as many as 73 (83.9%) respondents who have a positive attitude towards the application of the *Standard Precaution*, 68 (78.1%). respondents who have low barriers to the application of the *Standard Precaution* 71 (81.7%) respondents who said the availability of complete infection prevention

facilities and facilities to the application of *Standard Precaution* at Tgk Abdullah Shafi'i Hospital.

Attitude

Based on the results of the study it is known that the results of the analysis of the correlation of attitude relationships to compliance with the implementation of the *Standard Precaution* showed that there was a low relationship (r) of 0.287 and positive patterned means that the more positive the attitude of nurses, the more compliant in the application of *Standard Precaution*. The results of the statistical test obtained $p\text{-value} = 0.007$ ($p < 0.05$) can be concluded that there is a significant relationship between attitudes towards the application of *Standard Precaution* in the hospital Tgk Abdullah Shafi'i. This research is in line with research conducted by Dejoy et. al which concluded there is a positive relationship to the attitude of nurses with compliance with the implementation of *Standard Precaution*. When viewed the results of cross-tabulation between the attitude of nurses with compliance with the implementation of *Standard Precaution* at Tgk Abdullah Syafi'i Semakian Hospital positive nurse attitude then more obedient in the application of *Standard Precaution*.

Barriers to the implementation of standard precaution

Based on the results of the correlation test of the relationship of barriers to the application of *Standard Precaution* with compliance with the implementation of *Standard Precaution* showed that the barrier to the application of *Standard Precaution* there is a relationship with compliance with the implementation of *Standard Precaution* see a value (r) of -0.302 (negative relationship with relationship intensity). low) with a $p\text{ value}$ of 0.005. So this shows that the lower the barriers to the application of *Standard Precaution* the more compliant nurses in applying *Standard Precaution* at Tgk Abdullah Syafi'i Hospital. The results of this study are in line with research by (sahara, 2011). There is a significant link between barriers to the application of *Standard Precaution* to nurse compliance. High job demands sometimes make nurses abai terap implementation of *Standard Precaution*. Based on this research, nurses are still found who have obstacles in the application of standard precaution to the prevention of Covid 19 due to the high guidance of work. So that the embrace is reviewed between the workload and the needs of nurses in emergency department installations and internal medicine inpatient rooms in the era of pandemic covid 19 at Tgk Abdullah Syafi'I Hospital.

Availability of infection-preventing facilities

From the results of the correlation test analysis of the relationship of availability of facilities Availability an means of infection prevention facilities to compliance with the application of *Standard*

Precaution shows that there is a fairness of a positive patterned relationship with a value (r) of 0.435 means that the more complete infrastructure facilities are more compliant in the application of *Standard Precaution*. The results of statistical tests obtained $p\text{-value}$ 0.000 can be concluded that there is a significant relationship between the availability of Availability an means of infection prevention facilities to the application of *Standard Precaution* in Tgk Abdullah Syafi'i Hospital. The results of this study are in line with the results of research conducted Oleh Nurkhasanah 2018, there is a significant relationship between the availability of facilities to compliance with the implementation of standard vigilance. The availability of infection prevention infrastructure facilities is one of the factors that allow nurses to perform certain behaviors, namely the implementation of *Standard Precaution*. Limitations of infection prevention facilities are the greatest risk to the spread of the covid 19 virus from patients to nurses. To break the chain of spread of covid 19, there needs to be a health for the completeness of infrastructure facilities to prevent infection at Tgk Abdullah Syafi'i Hospital.

Table 4. Analysis of attitude relationships, job barriers, availability of availability of infection prevention facilities and facilities with compliance with *Standard Precaution*

Variable	B	Value	OR
Barriers to the implementation of standard precaution	-1.389	0.010	0.249
Availability an means of infection prevention facilities	2.562	0.001	12.963

Based on the above table of logistic regression test results obtained the result that the independent variable that has the most dominant relationship to the dependent variable (compliance with *Standard Precaution*) sequence is Availability an means of infection prevention facilities with an OR value of 12.936 (2.726-61.640). This means that availability an means of infection prevention facilities is more complete then 12 times nurses are more compliant in the application of *Standard Precaution*. And the more incomplete the availability of infection prevention facilities, the greater the chance of nurses contracting covid 19 at Tgk Abdullah Syafi'i Hospital.

4. Conclusion

From the results of research that has been done, there is a significant influence between compliance with the implementation of *Standard*

Precaution with Covid 19 transmission. The attitude of nurses, barriers in the application of standard *precaution* and completeness of infection prevention infrastructure facilities have a significant influence on the prevention of transmission of covid 19 in nurses at Tgk Abdullah Syafi'i Hospital. and the most dominant factor that affects compliance with the implementation of *Standard Precaution* is the availability of infection prevention infrastructure facilities.

5. Suggestion

In order to break the chain of transmission of covid 19 to nurses need special attention from the management of infection incident management in the Hospital to pay attention to the completeness of infection prevention infrastructure facilities and the supervision of nurses in the implementation of the *Standard Precaution* at Tgk Abdullah Syafi'i Hospital

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