

# ANALYSIS OF DOMINANT FACTORS AFFECTING THE IMPLEMENTATION OF COVID-19 SCREENING AT TGK CHIK DITIRO SIGLI HOSPITAL

\*<sup>1</sup>Ismuntania, <sup>2</sup>Kartika

<sup>1,2</sup> Department Of Nursing, STIKes Medika Nurul Islam, Pidie

\*E-mail :ismuntania366@gmail.com

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## Abstract

*Introduction: The implementation of the Covid-19 screening is very important to control the spread of the Corona Virus which is increasingly rampant. Screening is the first step that must be carried out on all suspected people including every hospital visitor. In principle, all visitors should be screened even if they are asymptomatic because some infected cases do not show any symptoms. The purpose of the study: to analyze the dominant factors that influence the implementation of Covid-19 screening at Tgk Chik Ditiro Sigli Hospital. The stages of this research are starting from the preparation, implementation, and analysis stages. The design used is a quantitative design with a causal association approach, which is to see a causal relationship. The method of data collection was done by distributing questionnaires and then analyzed using multiple linear regression statistical analysis. The next step is to present the data and draw conclusions. The results of this study were found that the factors of officers, patients, PPE, policies, and the environment affected the implementation of the Covid-19 screening with p-values of 0.001, 0.000, 0.002, 0.001, and 0.002, respectively. The most dominant factor influencing is the officer factor with the results of univariate analysis, namely  $Y = 19,877 + 0,091X1 + 0,045X2 + 0,080X3 + 0,043X4 + 0,072X5$ . This study concludes that the officer factor is the most dominant factor influencing the implementation of Covid-19 screening.*

**Keywords:** Dominant factor, Screening, Covid-19

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## Introduction

The spread of the 2019 Coronavirus (Covid-19) has spread almost throughout the world very quickly and has claimed 1.12 million lives. The process of early detection or screening of viral agents is very important to prevent wider transmission<sup>1</sup>. Screening is the first step that must be carried out on all suspected people including every hospital visitor without exception. In principle, all visitors should be screened even if they are asymptomatic because some infected cases do not show any symptoms<sup>2</sup>. This action determines the next step, for example, the patient must be immediately referred to a special Covid-19 referral hospital, undergo a rapid test, or only be examined according to complaints<sup>3</sup>. Therefore, screening procedures that are carried out properly will prevent the transmission of Covid-19 so that everyone in the hospital avoids the risk of transmission while reducing the burden of hospital management both mentally and financially.

The implementation of screening is so important in reality it has not been seen to be effective in hospitals. Many factors influence them, such as the accuracy of the implementation method, the availability of competent resources, the honesty of the patient in providing information, the availability of Personal Protective Equipment (PPE), clear policies, and others. patients and the hospital. The author found facts at Tgk Chik Ditiro Hospital that there were patients who were declared reactive after entering the regular ward and had contact with officers who previously handled them without adequate PPE. This condition puts the officers at risk of being infected and so far 22 officers at the Tgk Chik Ditiro Hospital have been declared reactive. In addition, competent resources are still limited. On the other hand, patients who are screened are also very secretive which may be afraid of negative stigma if they are infected with Covid-19. Patients seem hesitant to provide information so officers find it difficult to decide on the results of the screening. The limitations of PPE also often make officers limit the implementation of screening and also influence management policies. In

essence, screening should run optimally so that efforts to break the chain of virus transmission are not in vain. The findings above show that the implementation of screening still has many weaknesses that need to be analyzed so that in the future strategic improvements can be made for the effective control of Covid-19 transmission.

Based on the above phenomenon, the author is interested in researching the analysis of the dominant factors that affect the implementation of Covid-19 screening at Tgk Chik Ditiro Sigli Hospital. Through the results of this study, it is hoped that the Covid-19 screening will be carried out optimally to stop the transmission of Covid-19.

The purpose of this study is to analyze the dominant factors that affect the implementation of the Covid-19 screening. This study has a fairly high level of urgency which immediately finds the most dominant factors affecting the implementation of the Covid-19 screening, so strategic steps can also be taken to overcome the problems caused by these factors. and the transmission of Covid-19 can be controlled immediately

## **Methods**

### Types of research

The type of research used is quantitative research with a causal approach aimed at identifying cause-and-effect relationships between the variables that influence the variables that are affected<sup>13</sup>. In this study, the variables, namely the factors that affect the implementation of the Covid-19 screening, will be identified and measured to what extent they have an influence on the screening process and finally decide which factors have the most dominant influence.

### Research Locations and Subjects

This research will be conducted at the Tgk Chik Ditiro Sigli General Hospital. The subjects of this study were the Covid-19 screening officer and the Covid cluster team at the RSUD. Tgk Chik Ditiro Sigli.

### Research Instruments

The instrument used in the form of a questionnaire about the factors that affect the implementation of the Covid-19 screening as many as 50 statement items.

### Data Collection Techniques

The data collection technique is by distributing questionnaires. The questionnaire that will be distributed consists of a written statement containing the need for research to analyze the factors that influence the implementation of the Covid-19 screening. The questionnaire was designed by the author based on a literature review considering that the standard questionnaire for this variable has not been found because the disease is a new case. Because the questionnaire was designed by itself, the questionnaire will be tested for instruments namely validity and reliability tests.

### Data Analysis Techniques

Data analysis techniques that will be carried out in this research consist of univariate analysis, namely the results of the study will be described in the frequency distribution table. And then, bivariate analysis, namely analyzing the relationship between the independent variable and the dependent variable using Spearman rank analysis. Finally, multivariate analysis is a follow-up to bivariate analysis. If the bivariate analysis is only to see the relationship between variables, then multivariate analysis plays a role in analyzing the extent to which the strength of the independent variable affects the dependent variable so that it can be determined which factor has the most influence. The analysis that will be used is multiple linear regression analysis

## Results

### Descriptive analysis results

To obtain data on the dominant factors that affect the implementation of the Covid-19 screening, the researchers gave a questionnaire to the research subjects in the form of 50 questions containing a description of the factors suspected of influencing the implementation of the Covid-19 screening. being screened, Personal Protective Equipment used by officers, policies that apply at the hospital, and environmental factors around the implementation of the screening. The results of the descriptive analysis of this study can be described in the following table:

Table 1. Description of the implementation of Covid-19 screening (n = 30)

No	Screening	Amount	Percentage (%)
1	Succeed	22	73,7
2	Not successful	8	36,3
	Jumlah	30	100

Based on table 1 above, it can be seen that the implementation of screening in the successful category was 22 people (73.7%) and the unsuccessful category was 8 people (36.3%).

Table 2. Description of factors influencing Covid-19 screening (n = 30)

No	Officer factor	Amount	Percentage (%)
1	Skilled	21	70
2	Unskilled	9	30
	Amount	30	100
No	Patient factor	Amount	Percentage (%)
1	Honest	11	36,7
2	Dishonest	19	63,3
	Amount	30	100
No	APD factor	Amount	Percentage (%)
1	Available, complete	14	46,7
2	Available, incomplete	10	33,3
3	Not available	6	20,0
	Amount	30	100
No	Hospital policy factors	Amount	Percentage (%)
1	Available, run	14	46,7
2	Available, not running	16	53,3
3	Not available	0	0,0
	Amount	30	100
No	Environmental factor	Amount	Percentage (%)
1	Support	17	56,7
2	Does not support	13	43,3
	Amount	30	100

Based on table 2 above, it can be seen that the description of the factors that affect the implementation of the Covid-19 screening include; factor of officers with skilled category as many as 21 people and 9 people unskilled. The patient factor in the honest/open category was 11 people and the dishonest/closed category was 19 people. The PPE factor used in the available category, complete as many as 14 people, available, incomplete as many as 10 people, and not available as many as 6 people. The policy factor with the available category was carried out by 14 people, 16 people available and not available as many as 0 people. Environmental factors with the category of supporting as many as 17 people did not support as many as 13 people.

Bivariate analysis results

Table 3. The relationship between the officer factor and the implementation of Covid-19 screening (n = 30)

No	Officer factor	Screening Covid-19				Amount	<i>P-Value</i>
		Success		Not success			
		f	%	f	%		
1	Skilled	15	71,4	6	28,5	21	100,0
2	Unskilled	7	77,7	2	22,3	9	100,0
Total		2		2		100,0	

Based on table 3 above, it can be seen that the majority of officers with the dominant skilled category successfully carried out screening with a total of 15 people (71.4%). The results of the statistical test obtained a P-value < which is 0.001 so that there is a significant relationship between the officer factor and the success of Covid-19 screening.

Table 4. The relationship between patient factors and the implementation of Covid-19 screening (n = 30)

No	Patients factor	Screening process				Amount	<i>P-Value</i>
		Success		Not Success			
		f	%	F	%		
1	Honest/open	11	100,0	0	0,0	11	100,0
2	Dishonest/ Open	11	57,9	8	42,1	19	100,0
Amount		22		8		100,0	

Based on table 4 above, it can be seen that the majority of officers who failed to carry out screening were dominant because the patients were in the dishonest/closed category with a total of 8 people (42.1%). Statistical test results obtained a P value of < which is 0.000 so that there is a significant relationship between patient factors and the success of Covid-19 screening.

Table 5. The relationship between PPE factors and the implementation of Covid-19 screening (n = 30)

No	APD factor	Screening process				Amount	<i>P-Value</i>
		Success		Not Success			
		f	%	f	%		
1	Available, complete	10	71,4	4	28,6	14	100,0
2	Available, incomplete	8	80	2	20	10	100,0
3	Not available	4	66,7	2	33,3	6	100,0
Amount		22		8		100,0	

Based on table 5 above, it can be seen that the majority of officers who successfully carried out screening were dominant because PPE was available and complete with a total of 10 people (71.4%). The results of statistical tests obtained a P-value < which is 0.002 so that there is a significant relationship between the PPE factor and the success of the Covid-19 screening.

Table 6. The relationship between policy factors and the implementation of Covid-19 screening (n = 30)

No	Policy factor	Screening process				Amount		P-Value
		Success		Not Success		f	%	
		f	%	F	%			
1	Available, run	12	85,7	2	14,3	14	100,0	0,001
2	Available, not running	10	62,5	6	37,5	16	100,0	
3	Not available	0	0,0	0	0,0	0	0,00	
Amount		22		8		100,0		

Based on table 6 above, it can be seen that the majority of officers who successfully carried out screening were dominant because of the availability of policies and carried out by officers with a total of 12 people (85.7%). The results of the statistical test obtained a P-value < which is 0.001 so that there is a significant relationship between hospital policy factors and the success of Covid-19 screening.

Table 7. Relationship between environmental factors and the implementation of Covid-19 screening (n = 30)

No	Environmental factor	Screening process				Amount		P-Value
		Success		Not Success		f	%	
		f	%	f	%			
1	Support	15	88,2	2	11,8	17	100,0	0,002
2	Does not support	7	53,9	6	46,1	13	100,0	
Amount		22		8		100,0		

Based on table 7 above, it can be seen that the majority of officers who successfully carried out screening were dominant because of the supportive environment with a total of 15 people (88.2%). The results of statistical tests obtained a P value < which is 0.002 so that there is a significant relationship between environmental factors and the success of Covid-19 screening.

#### Multivariate analysis results

Table 8. Results of multiple linear regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	19,877	0,870		22,679	0,000
Petugas	0,091	0,019	0,465	6,227	0,000
Pasien	0,045	0,016	0,429	5,865	0,000
APD	0,080	0,002	0,401	6,205	0,000
Kebijakan	0,043	0,011	0,421	5,661	0,000
Lingkungan	0,072	0,001	0,409	5,215	0,000

To make it easier to read the results and interpret the regression analysis, an equation form containing the constants and regression coefficients is used which is obtained from the results of data processing that has been done previously. The regression equation that has been formulated is then processed data so that the final equation is obtained, namely:

$$Y = 19.877 + 0.091X1 + 0.045X2 + 0.080X3 + 0.043X4 + 0.072X5$$

Based on table 8 above, the value of the constant listed is 19,887 which means that if the independent variable in the model is assumed to be equal to zero, on average the variables outside the model will still increase the success of the Covid-19 screening implementation by 19,889 units. The value of the regression coefficient 1 of 0.091 can be interpreted that the officer (X1) affects the implementation of the Covid-19 screening (Y). This shows that when the skills of officers are higher, the implementation of nurse screening will be more successful. The value of the regression coefficient 2 of 0.045 can be interpreted that the patient factor (X2) affecting the implementation of screening (Y). This shows that when patient honesty increases, the implementation of Covid-19 screening will be more successful. The value of the regression coefficient 3 of 0.080 can be interpreted that the availability of PPE (X3) affects the implementation of Covid-19 screening (Y). This shows that when PPE is available, the implementation of COVID-19 screening will be more successful. The value of the regression coefficient 4 of 0.043 can be interpreted that the policy (X4) affecting the implementation of the Covid-19 screening (Y). This shows that when the policy is implemented it will increase the success of the Covid-19 screening implementation. Furthermore, the value of the regression coefficient 5 of 0.072 can be interpreted that a supportive environment (X5) affecting the implementation of Covid-19 screening (Y). This shows that when the available environment is supportive, the implementation of nurse screening will be more successful. Based on the analysis above, it can be concluded that the most dominant factor influencing the implementation of the Covid-19 screening is the officer factor. This shows that officers are the most important factor influencing the success of screening. Even though all conditions are supportive such as open patients, complete PPE, policies are available, and a supportive environment, if the officers are unskilled and indifferent, the implementation of Covid-19 screening will not be achieved.

## Discussion

Based on the results of the research, the implementation of screening in the successful category was 22 people (73.7%) and the unsuccessful category was 8 people (36.3%). Based on these results, it can be assumed that most of the COVID-19 patient screening implementers succeeded in carrying out the screening process that should have been carried out. The screening process carried out by officers should indeed be able to achieve high success so that very fast transmission can be prevented so that everyone can avoid being infected. Negligence in the screening process will have dire consequences. All people who come into contact with patients who are not identified but are positive must be ready to accept the risk of transmitting Covid 19. If the implementation is carried out by the established provisions, transmission can be suppressed very effectively. The first line of defense in preventing the transmission of Covid-19 is how to make screening run according to the provisions so that there is no transmission.

Furthermore, a description of the factors that influence the implementation of the Covid-19 screening, including; factor of officers with skilled category as many as 21 people and 9 people unskilled. In the officer factor, it was identified that some officers were skilled in screening positive Covid-19 patients. This shows that officers are already skilled in screening in principle. The skills of officers in the implementation of screening can guarantee a small number of Covid-19 transmission which is at risk of threatening everyone who has contact with patients who have been confirmed positive. The skill of the officer is certainly achieved by serious effort in learning the screening process. Officers who have maximum loyalty will be able to show skilled performance in every activity carried out, including carrying out the Covid-19 screening process which is very useful to suppress the wider transmission rate. The results of the study also showed that the staff at the hospital where the study was conducted had mostly succeeded in skillfully carrying out screening and had a good impact on reducing the transmission of Covid-19 in the hospital, which can be proven by the decrease in positive patients due to transmission around the hospital.

The patient factor in the honest/open category was 11 people and the dishonest/closed category was 19 people. The patient factor is a very interesting topic to discuss in this study because more patients are not honest about their condition when screening is carried out. The patient's openness is motivated by the fear of a negative stigma that will be labeled on them so they choose to be silent. In this screening process, the patient factor is also one of the determinants of the success of terminating the transmission of the Covid-19 virus in hospitals. Closed patients will be difficult to identify and the intervention that will be given will also be less precise because the information provided is not

complete. The results of this study indicate that patient factors still need to be maximized to contribute to providing clear and complete information so that it can be taken into consideration in determining patient status when screening.

The PPE factor used in the available category, complete as many as 14 people, available, incomplete as many as 10 people, and not available as many as 6 people.

The policy factor in the available category was carried out by 14 people, 16 people available and not available as many as 0 people. Environmental factors with the category of supporting as many as 17 people did not support as many as 13 people. Furthermore, based on the results of statistical tests, it was found that there was a relationship between officer factors, patient factors, PPE factors, hospital policy factors, and environmental factors with the implementation of Covid-19 screening with a P-Value < which was 0.001 (officer factor) 0.000 ( patient factor) 0.002 (PPE factor), 0.001 (hospital policy factor) and 0.002 (environmental factor). Furthermore, based on the results of the multivariate test, it was found that all of the variables studied, starting from the factors of officers, patients, Personal Protective Equipment, Policies, and the environment, were finally identified that the officer factor that seemed to make the most dominant contribution to the success of the Covid-19 screening process with the value of the regression coefficient 1 of 0.091 can be interpreted that the officer (X1) has an effect on the implementation of the Covid-19 screening (Y). This shows that when the skills of officers are higher, the implementation of nurse screening will be more successful.

Based on the results of the study, it was found that the most dominant factor and variable influencing the success of the Covid-19 screening implementation at Tgk Chik Hospital Di Tiro Sigli was the officer factor. This shows that officers are the most important factor influencing the success of screening. Even though all conditions are supportive such as open patients, complete PPE, policies are available, and a supportive environment, if the officers are unskilled and indifferent, the implementation of the Covid-19 screening will not be achieved.

The existence of the screening officer is the spearhead that is essential in the successful implementation of the Covid-19 screening. Officers are active and dynamic figures who can have a more real and broad impact compared to other factors such as policy factors, environmental factors, Personal Protective Equipment factors, and so on. . All factors that are excluded from the officer factor are also controlled by the officer himself. Therefore, the screening will be successful if the officer can control all the variables that influence it. Even though the physical environment and equipment in the screening process have been adequately provided in the hospital, the officers do not carry out all the processes properly, so the screening is only a procedural process that must be passed without considering the quality in doing so. Therefore, in this case, it is necessary to develop and increase knowledge of COVID-19 screening officers so that they have more qualified capabilities in the success of the screening process whose benefits are so essential both for hospitals and for their patients.

## **Conclusion**

The conclusion that can be drawn from this study is that the first based on the univariate test, it was found that the implementation of screening was in the successful category as many as 22 people (73.7%) and the unsuccessful category as many as 8 people (36.3%). and a description of the factors that influence the implementation of the Covid-19 screening, including; factor of officers with skilled category as many as 21 people and 9 people unskilled. The patient factor in the honest/open category was 11 people and the dishonest/closed category was 19 people. The PPE factor used in the available category, complete as many as 14 people, available, incomplete as many as 10 people, and not available as many as 6 people. The policy factor in the available category was carried out by 14 people, 16 people available and not available as many as 0 people. Environmental factors with the category of supporting as many as 17 people did not support as many as 13 people. Furthermore, based on the results of statistical tests, it was found that there was a relationship between officer factors, patient factors, PPE factors, hospital policy factors, and environmental factors with the implementation of Covid-19 screening with a P-Value < which was 0.001 (officer factor) 0.000 ( patient factor) 0.002 (PPE factor), 0.001 (hospital policy factor) and 0.002 (environmental factor). Furthermore, based on the results of the multivariate test, it was found that all of the variables studied, starting from the factors of officers, patients, Personal Protective Equipment, Policies, and the environment, were finally identified that the officer factor that seemed to make the most dominant contribution to the success of the Covid-19 screening process with the value of

the regression coefficient 1 of 0.091 can be interpreted that the officer (X1) affects the implementation of the Covid-19 screening (Y). This shows that when the skills of officers are higher, the implementation of nurse screening will be more successful.

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