Analysis of Nursing Behavior in Prevention of Nosocomial Infection in Navy Hospital Dr. Soedibjo Sardadi 2018

Theresie Chindyana Herman[1], A.L.Rantetampang[2], Hasmi[3], Anwar Mallongi[4]

[1]Magister Program of Public Health, Faculty of Public Health, Cenderawasih University, Jayapura.
[2,3]Lecturer of Master Program in Public Health. Faculty of Public Health, Cenderawasih University, Jayapura
[4]Environmental Health Department, Faculty of Public Health, Hasanuddin University, Makassar.

Corresponding Author: Anwar Mallongi

ABSTRACT

Background: The hospital is one of the health facilities that has a very important role in improving public health. Knowledge about infection prevention and hygiene behavior is very important for nurses, because hospitals and other health facilities are very dangerous and prone to infection. The general objective of this study is to analyze nurses' behavior in preventing nosocomial infections.

The research method is "Cross Sectional". The population is all nurses at the Naval Hospital Dr. Soedibjo Sardadi. The sampling technique is done by using Purposive Sampling. Primary data is collected by interview techniques using questionnaires and observations while secondary data uses data from the Hospital. Data are analyzed by univariate and bivariate.

The results showed that there was a relationship between the level of knowledge and preventive behavior (p = 0,000; RR = 2,667; CI (95%) = 1,090-6,524), attitudes with preventive behavior. 005 (RP = 1,745; CI (95%) = 0.970-3.141), preventive behavior (p = 0.008 (RP = 2.365; CI (95%) = 0.806-6.938)), whereas for the physical environment with preventive behavior there is no relationship with preventive behavior (p = 0.226 (RP = 1,800; CI (95%) = 0.448-7.225), means with preventive behavior (p = .226 (RP = 1,800; CI (95%) = 0,448-7,225), Motivation with preventive behavior (p = 0.323 (RP = 1,346; CI (95%) = 0.601-3.017.

Keywords: Nurse, Behavior Preventive and Nosocomial

1. INTRODUCTION

In Papua, research on nosocomial infections was carried out by Daniel Lantang and Dessy Paiman, Department of Biology, FMIPA, Cenderawasih University, Jayapura - Papua, Vocational School of Nursing, Jayapura in 2008 with the title "Aerobic Bacteria Causing Nosocomial Infection in the General Hospital. Abepura, Jayapura City, Papua". The results of this study indicate that the Operating Room is positive for aerobic bacteria which cause nosocomial infections.

Knowledge about infection prevention and hygiene behavior is very important for nurses, because hospitals and other health facilities are very dangerous and prone to infections. In addition, hospital sanitation facilities must also be considered, because good sanitation facilities can prevent transmission of nosocomial infections. Good sanitation facilities will affect the quality of hospital services as well.

Based on the results of an initial survey conducted at the Naval Hospital Dr. Soedibjo Sardadi was found by a nurse performing infusion treatment by not using aseptic principles, for example washing hands before handling infusions. In addition, there were still nurses who did not wear masks when performing nursing actions. In some treatment rooms, it is also still found handling dirty linen that does not meet the standards, namely by placing the dirty linen at the end of the hall of the treatment room without any separators or dividers. To increase efforts to prevent and control nosocomial infections a supportive behavior is needed, especially for a nurse.

2. MATERIALS AND METHODS

A. Research Type

This type of research that will be used is to use a descriptive correlation study method (Correlation Study) with a cross sectional approach (Cross Sectional), which is a type of research that emphasizes the measurement or observation of independent variables and dependent variables measured at the same time and moment.

B. Place and Time

1. Place

This research was conducted at the Naval Hospital Dr. Soedibjo Sardadi in 2018.

2. Time

This research was conducted in October 2018

C. Population and Samples

1. Population

The population used as subjects in this study were all nurses at the Naval Hospital Dr. Soedibjo Sardadi, totaling 54 people.

2. Samples

The sample used in this study is the entire population that meets the criteria. The inclusion and exclusion criteria in this study are:

a. Inclusion Criteria

Inclusion criteria in this study were nurses at the Naval Hospital Dr. Soedibjo Sardadi who is not currently in a trial period (training) and is not being conducted supervision either for the purposes of accreditation or for giving rewards. Has the status of a Marine Officer and contract worker and is willing to be a respondent in this study.

b. Exclusion Criteria

The exclusion criteria in this study were nurses at the Naval Hospital Dr. Soedibjo Sardadi who was carrying out study assignments, nurses who were on leave, and nurses who were not willing to be respondents.

3. RESULTS

Bivariate Analysis Using Chi-square Test

Bivariate analysis was conducted to determine the relationship of independent variables (Knowledge, Attitudes, Actions, Physical Environment, Means and Motovation) with the dependent variable, namely the nurses' behavior in the prevention of nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi. The technique used to analyze is Chi-square analysis.

a. Relationship of knowledge with preventive behavior

Table 1: Relationship of Knowledge with Preventive BehaviorNosocomial Infection at Naval Hospitaldr. Soedibjo Sardasdi in 2018.

Knowledge	Treatment behavior					
	Negative		Positive		Total	
	n	%	N	%	n	%
Less	5	11.9	3	7.1	8	19
Good	0	0	34	81	34	81
Total	5	11.9	37	88.1	42	100

P value = 0.000 ; RP = 2.667 ;CI (95%)= 1.090-6.524

The results showed that 34 nurses who were well-informed about nosocomial infections all behaved positively in preventing nosocomial infections in hospitals. While from 8 nurses who lack knowledge there are 3 (7.1%) nurses who behave positively in preventing nosocomial infections in hospitals. Based on the Chi Square statistical test results obtained the value of P value = 0.000, so it can be concluded that there is a relationship between nurses' knowledge with the behavior of nosocomial infection prevention at the Navy Hospital Dr. Soedibjo Sardadi.

b. Relationship between attitude and preventative behavior

Table 2. Relationship between Attitude and Preventive BehaviorNosocomial Infection in the Anger HospitalLautdr. Soedibjo Sardadi in 2018

Attitude	Treatment behavior					
	Negative		Positive		Total	
	n	%	n	%	n	%
Less	4	9.5	5	11.9	9	21.4
Good	1	2.4	32	76.2	33	78.6
Total	5	11.9	37	88.1	42	100

P value = 0.005 ; RP = 1.745; CI (95%)= 0.970-3.141

The results showed that among 33 nurses who behaved well there were 32 (76.2%) nurses who behaved positively in preventing nosocomial infections in hospitals. While from 9 nurses who were not good, there were 5 (11.9%) nurses who behaved positively in preventing

nosocomial infections in hospitals. Based on the Chi Square statistical test results obtained the value of P value = 0.005, it can be concluded that there is a significant relationship between attitude and behavior in preventing nosocomial infections at the Navy Hospital Dr. Soedibjo Sardadi. If seen from the value of odd ratio, the value is 25.6, which means that if the attitude is good, then the tendency to behave positively is 25.6 times compared with the unfavorable attitude.

Table 3. Relationship between Physical Environment and BehaviorPrevention of Nosocomial Infection at HomeSea Lift Hospital dr.Soedibjo Sardhadi 2018

Physical environment	Treatment behavior					
	Negative		Positive		Total	
	n	%	n	%	n	%
Less	1	2.4	1	2.4	2	4.8
Good	36	85.7	4	9.5	40	95.2
Total	37	88.1	5	11.9	42	100

P value = 0.226 ; RP = 1.800 ; CI (95%)= 0,448-7.225

The results showed that among 40 nurses who worked with good physical environment, there were 36 (85.7%) nurses who behaved positively in preventing nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi, while from 2 nurses who worked with a less favorable physical environment, there were 1 (2.4%) nurses who behaved positively in preventing nosocomial infections in hospitals. Based on the Chi Square statistical test results obtained a value of P value = 0.226, it can be concluded that there is no statistically significant relationship between the physical environment with the behavior of preventing nosocomial infections in the Navy Hospital Dr. Soedibjo Sardadi.

c. *Relationship between means and prevention behavior*

Table 4. Relationship between Means and Preventing Infection Behavior Nosocomial at Naval Hospital, SoedibjoSardadi in 2018

Facility	Treatment behavior					
	Negative		Positive		Total	
	n	%	n	%	n	%
Not complete	1	2.4	1	2.4	2	4.8
Complete	4	9.5	36	85.7	40	95.2
Total	5	11.9	37	88.1	42	100

P value = 0,226; RP = 1.800 ;CI (95%)= 0.448-7.225

The results showed that among 40 nurses who carried out activities with complete facilities there were 36 (85.7%) nurses who behaved positively in preventing nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi while from 2 nurses who did activities with incomplete facilities, there were 1 (2.4%) nurses who behaved positively in preventing nosocomial infections in hospitals. Based on the results of the Chi Square statistical test with a P value = 0.226. Soedibjo Sardadi.

d. *Relationship of motivation with preventive behavior*

Table 5: Relationship of Motivation with Infection Prevention Behavior Nosocomial at Naval Hospital, SoedibjoSardadi in 2018

Motivation	Treatment behavior					
	Negative		Positive		Total	
	n	%	n	%	n	%
Low	1	2.4	2	4.8	3	7.1
High	4	9.5	35	83.3	39	92.9
Total	5	12	37	88.1	42	100

P value = 0.323 ; RP = 1.346;CI (95%)= 0.601-3.017

The results showed that among 39 nurses who were highly motivated in the prevention of nosocomial infections at the Naval Force Hospital Dr. Soedibjo Sardadi, there were 4 (9.5%) nurses who behaved negatively in preventing nosocomial infections in hospitals. While from 3 nurses with low motivation there were 2 (4.8%) nurses who behaved positively in preventing nosocomial infections in hospitals. Based on the Chi Square statistical test results obtained P value = 0.323, it can be concluded that there is no significant difference or there is no statistically significant relationship between motivation and nurses' behavior in the prevention of nosocomial infections.

4. DISCUSSION
1. Relationship between Knowledge and Nurse Behavior in Prevention of Nosocomial Infection in the Navy Force Hospital Soedibjo Sardadi.

From the results of univariate analysis it was found that nurses with poor knowledge totaled 8 (19%) and nurses with good knowledge totaled 34 people (81%). Thus the percentage can be concluded that the majority of nurses have good knowledge

about the prevention of nosocomial infections at the Navy Hospital Dr. Soedibjo Sardadi. The results of this study are in accordance with Green's theory which states that the level of knowledge is a predisposing factor in positive behavior, because with the knowledge possessed by a person will arise the desire or willingness to take an action. Knowledge must also continue to be added, but the addition of knowledge can not be done in a short time and then stopped just like that, but must be continuous and ongoing. According to Notoatmodjo (1993) in Asturi (2004), the addition of knowledge can be done by holding training by means of discussion between officers, conducting two-way communication in order to provide health information and messages.

Then from the results of the bivariate analysis with Chi Square statistical test p = 0.000, it was found that there was a statistically significant relationship between knowledge and nosocomial infection prevention behavior at the Navy Force Hospital Dr. Soedibjo Sardadi. The results of this study are consistent with Nurhayati's (1997) study which found that there was a significant relationship between knowledge and compliance behavior of health workers in the prevention of nosocomial infections in Hasan Sadikin Hospital Bandung with a p value = 0,000. Likewise, Fauzi's research (2002) found that there was a significant relationship between knowledge and infection prevention behavior in the delivery of midwives in private practice in the city of Jambi, with a value of p = 0.004. In the research by setiawati (2009), it was also found that there was a significant relationship between the level of knowledge and the compliance of health workers doing hand hygiene in the prevention of nosocomial infections in the perinatology room of Dr. RSUPN Hospital. Mangunkusumo Jakarta, with a value of p = 0,000. However, the results of this study are not in accordance with the results of research chonducted by Astuti (2004), where the results of his research using the Chi Square statistical test found that there was

no meaningful relationship between knowledge and prevention behavior of nosocomial infections in intensive care at Medistra Hospital which had value of p = 0.108.

In this study also conducted unstructured observations to the head of the room related to the efforts made by the Navy Hospital Dr. Soedibjo Sardadi in increasing nurses' knowledge about the prevention of nosocomial infections, namely by holding seminars and training on nosocomial infections but only a small proportion of nurses could attend and the time of implementation was not scheduled.

2. Relationship between Attitudes with Nurse Behavior in Prevention of Nosocomial Infection in the Navy Force Hospital Dr. Soedibjo Sardadi.

From the results of the univariate analysis it was found that nurses with bad attitude totaled 9 (21.45%) and nurses with good attitude totaled 33 people (78.6%). Thus the percentage can be concluded that the majority of nurses have a good attitude about the prevention of nosocomial infections at the Navy Hospital Dr. Soedibjo Sardadi. According to Walgito (2003), the attitudes of individuals give color or style to the behavior or actions of the individual concerned. By knowing the attitude of a person can guess how the response is expected to him. So by knowing someone's attitude, then you will get a picture of the behavior displayed. Thus it can be said that attitude is not a form of activity, but only one of the predisposing factors that can support the occurrence of a behavior.

Then based on the results of the bivariate analysis with the Chi Square statistical test p = 0.005, it was found that there was a significant relationship between attitude and the behavior of preventing nosocomial infections in the Navy Hospital Dr. Soedibjo Sardadi. The results of this study differ from the research of Astuti (2004) that there is no significant relationship between attitude and behavior in preventing nosocomial infections in

intensive care rooms at Meditra Hospital with a p value = 0.716. Likewise in the Pancaningrum study (2011) which found that there was no significant relationship between attitude and the performance of nurses in the inpatient room in the prevention of nosocomial infections in Haji Hospital Jakarta, with a p value = 0.719. However, the results of this study are in accordance with research conducted by Nurhayati (1997) who found that there was a significant relationship between attitudes and health worker compliance behavior in preventing nosocomial infections in Hasan Sadikin Hospital with a value of p = 0,000. Thus it can be said that having a good attitude towards preventing nosocomial infections will certainly behave positively.

3. Relationship between Physical Environment and Nurse Behavior in the Prevention of Nosocomial Infection at the Navy Force Hospital Dr. Soedibjo Sardadi.

From the univariate results the physical environment was grouped into two categories: 2 people (4.8%) and 40 people (95.2%) good categories. Thus the percentage can be concluded that the majority of nurses' assessments about the physical environment at the Naval Force Hospital Dr. Soedibjo Sardadi is good. The environment is a factor that is quite influential on the formation of individual characters (Robin, 2002). This opinion can be perceived that a comfortable work environment can shape the character of an individual that is reflected in his actions. The results of the bivariate analysis showed that among 40 (95.2%) nurses who worked with the physical environment at the Naval Force Hospital dr. Soedibjo Sardadi was good there were 36 (85.7%) nurses who behaved positively in the prevention of nosocomial infections at the Naval Force Hospital Dr. Soedibjo Sardadi. Whereas out of 2 (4.8%) nurses who work in a physical environment at the Naval Force Hospital dr. Soedibjo Sardadi is not good there are 1 (2.4%) nurses who behave positively in the

prevention of nosocomial infections at the Navy Force Hospital Dr. Soedibjo Sardadi.

Based on the Chi Square statistical test results obtained p value = 0226, it can be concluded that there is no significant difference or there is no statistically significant relationship between the physical environment with the nurses' behavior in preventing nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi. The results of this study are consistent with the results of a study conducted by Pancaningrum (2011) which found that there was no significant relationship between the work environment and the performance of implementing nurses in the prevention of nosocomial infections in Jakarta Haji Hospital with a value of p = 0.186. However, the results of this study differed from Nasution (2008) who found that there was a relationship between the working conditions of nurses and the care measures in post-surgical patients at RSU Dr. Pringadi Medan, with a value of p = 0,000. On the results of the physical environment is not related to the behavior of nurses in the prevention of nosocomial infections in the Navy Hospital Dr. Soedibjo Sardadi. This is not in accordance with the theory of Green (1980) in Astuti (2004) which states that the physical environment is an enabling factor for behavior that can bring up motivation to perform a person's behavior.

4. The Relationship between Means and Nurse Behavior in the Prevention of Nosocomial Infection at the Naval Force Hospital Dr. Soedibjo Sardadi.

From the results of univariate analysis it was found that grouped into two categories (4.8%) and complete categories of 40 people (95.2%). Thus, the majority of nurses' assessments at the Navy Force Hospital Dr. Soedibjo Sardadi is complete. However, if seen from the distribution, respondents will find out about infections at the Naval Hospital Dr. Soedibjo Sardadi gave a number of questions that had a high value not available with a number of

questions available as needed, then asked questions that were available which were sufficient antiseptics for washing hands. From the results of bivariate analysis which showed 40 of the nurses who did care at home with 36 (85.7%) nurses who behaved positively in opposing infections in Nosocomial in the Naval Sea Hospital Dr. Soedibjo Sardadi. While 67 nurses who perform nursing actions with incomplete facilities are provided 1 (2.4%) nurses who behave positively in preventing infection in Nosocomial in the Army Marine Hospital Dr. Soedibjo Sardadi. Based on the Chi Square statistical test results obtained p value = 0.226, it can be concluded that there is no significant difference or no relationship related to statistics between Naval Hospital at Naval Hospital dr. Soedibjo Sardadi. The results of this study are consistent with the results of a study conducted by Pancaningrum (2011) which found that there was no relationship between work facilities and infrastructure with the executing nurses in the field of nosocomial infections in Haji Hospital Jakarta with a p value = 0.859.

5. Relationship of Motivation with Nurse Behavior in Prevention of Nosocomial Infection in the Navy Force Hospital Dr. Soedibjo Sardadi.

Based on the results of univariate analysis, nurses' motivation showed that they were grouped into two categories, namely nurses with low motivation, 3 people (7.1%) and nurses with high motivation were arrested by 39 people (92.9%). Thus the percentage can conclude that most nurses are highly motivated about opposing nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi. From the results of the distribution of respondents regarding the campaign at the Navy Hospital Dr. Soedibjo Sardadi can help, there is one question that is in my opinion asking for important nosocomial protection in increasing hospital revenue and help nurses with almost all the answers yes. This can be interpreted as a nurse at the Naval

Hospital Dr. Soedibjo Sardadi has a high motivation to get prosperity and increased income. According to Suhedi (2010), some motivations are not realized by individuals, so some of the impetus that arises is often related to beneficial changes. Thus pushing from within that is very strong often makes the required individual not biased to understand his own motives.

Then based on the Chi Square statistical test results obtained a value of P = 0.323, it can be denied there is no significant difference or there is no relationship that requires statistics between motivation and nurse training in increasing nosocomial infections at the Navy Hospital Dr. Soedibjo Sardadi. The results of this study are in accordance with research conducted by Pancaningrum (2011) which found that there was a relationship between motivation and the performance of nurses implementing infection protection in hospital inpatients. Jakarta Hajj, with a value of p = 0.562.In the results of this study motivation is not related to nurses' behavior in the prevention of nosocomial infections at the Naval Hospital Dr. Soedibjo Sardadi. It can be interpreted that although nurses' motivation is high, it is not certain that they take action or behave positively with prevention of nosocomial infections according to Marquis (2010), there are a number of things or very basic resources for effective leadership, namely reward power, legitimate, expert power and referent power. Reward power contains the ability to reward whatever results they value. With reward a manager gets a very broad way to get employees who are able to work in accordance with the results of meeting organizational goals. And with positive leadership through a reward mechanism will develop loyalty and obedience to the leadership. Based on this, someone is motivated to work when influenced by the reward power given by managers to their employees. So that motivation can arise from something positive.

5. CONCLUSIONS

1. There is a relationship between the level of knowledge and behavior of nurses in the prevention of nosocomial infection P value = 0.000 (RP = 2,667; CI (95%) = 1,090-6,524).

2. There is a relationship between attitude and nurses' behavior in the prevention of nosocomial infection P value = 0.005 (RP = 1.745; CI (95%) = 0.970-3.141).

3. There is a relationship between actions and nurses' behavior in the prevention of nosocomial infection P value = 0.008 (RP = 2.365; CI (95%) = 0.806-6.938).

4. There is no relationship between the physical environment with nurses' behavior in the prevention of nosocomial infection P value = 0.226 (RP = 1,800; CI (95%) = 0.448-7,225).

5. There is no relationship between the means with nurses' behavior in the prevention of nosocomial infection P value = 0.226 (RP = 1,800; CI (95%) = 0.448-7,225).

6. There is no relationship between motivation and nurses' behavior in the prevention of nosocomial infection P value = 0.323 (RP = 1,346; CI (95%) = 0.601-3.017).

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