

## Conference Paper

# The Correlation Between Social Environment Factor and Nurses' Standard Vigilance Implementation in the Inpatient Room at Siti Rahmah Islamic Hospital Padang in 2015

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## Abstract

Standard vigilance is an infection control universally either for the patient or the medical staffs. The number of occurrence for needle punctured wound in inpatient room at Islamic Hospital Siti Rahmah in the amount of 2 until 3 times in a year, the usage of self protection equipment that is still less optimal, and the implementation of hand washed that is still not effective yet. The factor of social environment covering; organization, leadership, norms and group climate, communication, and operational procedures. The purpose of this research is to identify the correlation between social environment and the implementation of standard vigilance of the nurses in Inpatient Room at Islamic Hospital Siti Rahmah Padang. The research designed used was analytical cross-sectional on 46 nurses in inpatient room at Islamic Hospital Siti Rahmah Padang. The research results show that there is meaningful correlation between leadership and the implementation of standard vigilance ( $p = 0,007$ ), while organization, norms and group climate, communication, operational procedure/SPO do not show meaningful correlation with the implementation of nurses' standard vigilance. The results of this research can become information for the nurses that they need to add their knowledge through training related to the standard vigilance of nurses, especially in the case of hand washing, the usage of self-protection equipment, and managing the usage of needle and sharp objects.

**Keywords:** social environment factor, nurse characteristic, the implementation of nurses' standard vigilance

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## 1. Background

Standard vigilance is an infection control action which is done by all health labor to reduce the risk of infection-spreading and have the principle basis on blood and body liquid can be potential in transmitting disease, either from the patient or the health labor

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[1]. Standar vigilance is designed to reduce the risk of disease infection on health labor, both from the known and the unknown source [2].

Standard vigilance is a new way of caring to minimum the blood and liquid exposure on all patients, without seeing the infection status. A worker who works in the health service, the nurse, has the right of protection and safety when working. Nurse as the labor of health who gives nursing care for 24 hours to the patient is demanded to give qualified and professional service.

Nursing service quality is kept as the set and executed standard in every nurse's action. The guarantee on nursing service quality is the first standard of nurse's professional performance. Systematically, nurse develops the nursing plan and also manages the strategy and plan to reach the expected result. Nurse contributes in the qualified nursing implementation, also utilizes the proper resource to plan and give safe, effective and responsible nursing service for the patient [3].

Standard vigilance must be obeyed by the health labor because it is the guideline to the infection control which is developed to protect all workers in the health service and also the patients, so it can prevent the disease which is spreading through blood and certain body liquid. Cross infection which occurs in some health center or known as nosocomial infection is one of the big risks which are faced by the health labor in every health center.

Standard vigilance is created and must be applied to protect whoever they are from accident which can occur any time, health officer must have good knowledge about infection transmission prevention, behave and act properly in executing every action. This case must be given attention because very individual who works in the hospital environment or the other health center is a group of people who is vulnerable to get infected [4]. The research by Ningsih (2014) [5] stated that the implementation of standard vigilance by the nurse in Batu Sangkar Regional Public Hospital found that there are some nurses which are not implemented the standard vigilance properly.

The working nurse gives nursing care to the patient, beside the patient's safety, nurse must give attention to themselves too. Standard vigilance emphasizes the patient safety, when the patient's safety is already secure, the safety for the nurse will secure too. Nurse is the health officer who mostly interacts with the patient, and have the higher risk related to the safety than the other health labor [6].

Standard vigilance is influenced by some factors which interact with each other in the health system. The research by Henriksen, Kaye, and Morisseau (1993) in Henriksen, Dayton, Keyes, Carayon, Hughes (2008) [7] said that the influenced factors cover the individual characteristic of health officer, the work's nature, physical environment,

combined human and system, organization/social environment, management and outer environment factor. Standard vigilance can be obtained when the contributed factor toward the accident can be minimalized or even prevented.

World Health Organization (2002) [8] estimates that around 2,5% of health officer in the world face the HIV exposure and around 40% face Hepatitis B and C virus exposure [9]. The health officer gets the serious risk which sometimes threatened their life. The infection can occur through blood which is transmitted in some works and nursing action. It is estimated that 600.000 to 800.000 injuries due to the injection needle occur annually, with half of them report the incident. It is estimated that every year, more than 1.000 nurses will get serious infection, such as hepatitis B or C virus or HIV from injection wound. It is also estimated that 50 - 247 health labors which is infected by hepatitis C virus (HCV) each year have the relation with the injection's needle wound [10].

Danger threat toward the nurse's safety is divided into five groups, they are exposure risk of biological infectious agent, chemical material, the risk from the environment/mechanical, physical, and psychosocial risk [6]. Standard vigilance covers some cases, they are: Hand sanitation (washing hand), self-protector tool (SPT), injection needle and sharp tool management, disinfection and sterilization, environment sanitation, patient placing, linen, breath sanitation and cough ethics, patient nursing tools, officer's health, safe injection, and infection prevention of lumbar function procedure [11].

In this research, the writer is going to relate the knowledge and observation, which are hand sanitation (washing hand), self-protector tools (SPT), injection needle and sharp tool management that is done by the nurse in the inpatient room of Siti Rahmah Islamic Hospital Padang. Hand sanitation (washing hand), self-protector tool (SPT), injection needle and sharp tool management are the three important things which is going to be studied in this research, because those three things become the most important part in implementing standard vigilance by the nurse in the nursing care for the patient. This research is also conducted to find out the relation of social environment factor with the nurse's standard vigilance in the inpatient room of Siti Rahmah Islamic Hospital Padang.

## 2. Research Method

This research used quantitative research method with the analytical type of research. The researcher used the *cross-sectional* approach. This research analyzed the relation between the independent variable which was social environment to the dependent variable of standard vigilance implementation.

### 3. Research Result

This research is done in Siti Rahmah Islamic Hospital Padang with the sample of 46 nurse, they are:

TABLE 1: Frequency Distribution of Nurse Based on Age, Education Degree, Service and Training Time in the Inpatient Room of Siti Rahmah Islamic Hospital Padang in 2015.

The Nurse Characteristics	f	%
Ages		
≤ 35 years old (Initial Adult)	42	91,3
> 35 Years Old (Late Adult)	4	8,7
Educational Level		
DIII	44	95,7
Undergraduate Program in Nursing	2	4,3
Years of service		
≤ 5 years (New)	29	63
> 5 Years (Long)	17	37
Training		
0 (No)	9	19,6
1 (Yes)	37	80,4
Total	46	100

Based on the Table 1 result, it can be seen that more than half of the nurses in the age of ≤ 35 are in the percentage of 91,3%, while the age of > 35 years old are 8,7%. Almost all nurses have the degree of DIII which is in the percentage of 95,7% and S1 nursery are 4,3%. The nurses who have service time of ≤ 5 years are 63%, and the respondent of > 5 years is in the percentage of 37%. More than a half of the nurses who involved in the training are in the percentage of 80,4%, and 19,6% never involved in the training.

In Table 2, it is obtained that the analysis result have the average of all social environment factors which exist in the inpatient room of Siti Rahmah Islamic Hospital, which in the percentage of 22,61 (95% CI: 21,81 – 23,41), with the standard deviation of 2,687. The lowest result is 15 and the highest is 25. From the estimation result of organization variable, it can be concluded that 95% is believed that the average of all nurse's social environment factors are between 21,81 to 23,41. The average value of each sub variable of organization factors are almost the same, with the lowest average in the sub variable leadership in the number of 4,26 and the highest average in the communication in the number of 4,85. This shows that average value in each sub variable is above the average or considered as good.

Analysis result is obtained the average value of nurse's standard vigilance implementation which exist in Siti Rahmah Islamic Hospital in the number of 17,50 (95% CI: 17,13 –

17,87), with the standard deviation of 1,261. The lowest result is 13 and the highest is 20. By the estimation result of standard vigilance variable, it can be concluded that 95% is believed that the average of nurse’s standard vigilance is between 17,13 to 17,87. It shows that the average value of nurse’s standard vigilance implementation in the inpatient room of Siti Rahmah Islamic Hospital Padang is considered good enough.

TABLE 2: Distribution of Social Environment Factor and the Nurse’s Standard Vigilance Implementation in the Inpatient Room of Siti Rahmah Islamic Hospital Padang in 2015.

Variables	Mean	SD	Min – Max	95% CI
Social Environment Factor	22,61	2,687	15 – 25	21,81 – 23,41
Organization	4,43	0,935	2 – 5	4,16 – 4,71
Leadership	4,26	1,163	2 – 5	3,92 – 4,61
Norms and Group Climate	4,61	0,649	3 – 5	4,42 – 4,80
Communication	4,85	0,363	4 – 5	4,74 – 4,96
Operational Procedure / SPO	4,46	0,657	3 – 5	4,26 – 4,65
The Implementation of Nurses’ Standard Vigilance	17,50	1,261	13 – 20	17,13 – 17,87

TABLE 3: Frequency Distribution of Washing Hand Questionnaire Result in the Inpatient Room of Siti Rahmah Islamic Hospital Padang in 2015 (n = 46).

Hand Wash	F	%
Before Visiting Patient	46	100
Before invasive action	45	97,82
After visiting the patient	45	97,82
After exposed to the liquid of patients’ body	46	100
Aftar having the contact with patients’ environment	46	100

According to Table 3, it shows that when washing hand before interacting with the patient, all nurses wash their hand. Before invasive action, there is 1 nurse who does not wash the hand, after interacting with the patient, there is 1 nurse who does not wash the hand, while the washing hand after contacted with the patient’s body liquid, all nurses wash the hand properly, it is also done after contacted with the patient’s environment which shows all nurses are washing the hand.

According to Table 4, it shows that the utilization of self-protector tool is utilized properly by 35 nurses (76,09%), while the less good utilization are 11 nurses (23,91%). Injection needle and sharp tool management shows that the nurses who do the management properly are 13 nurses (28,26)%, while less proper management implementation are 33 nurses (71,74%).

TABLE 4: Frequency Distribution of Self-Protector Tools Utilization Questionnaire and Injection Needle and Sharp Tool Management by the Nurse in the Inpatient Room of Siti Rahmah Islamic Hospital Padang in 2015 (n = 46).

The Implementation of Standard Vigilance	f	%
Self-protection environment		
- Good	35	76,09
- Poor	11	23,91
The management of needles and sharp objects		
- Good	13	28,26
- Poor	33	71,74

TABLE 5: The relation analysis of social environment factor with the nurse's standard vigilance implementation in the inpatient room of Siti Rahmah Islamic Hospital Padang in 2015.

Variables	R	P
Social Environment Factor	0,327	0,027
Organization	0,235	0,117
Leadership	0,390	0,007
Norms and Group Climate	0,023	0,880
Communication	0,136	0,367
Operational Procedures / SPO	0,196	0,196

The relation of social environment factor with the nurse's standard vigilance in the inpatient room of Siti Rahmah Islamic Hospital Padang in 2015 has covered the relation of organization factor with the nurse's standard vigilance implementation using the *spearman's* correlation test, it is because the data is distributed not normal. The analysis result can be seen in Table 5, that the analysis is obtained the value of  $r = 0,327$  for social environment factor variable, it means that the relation of social environment factor with the nurse's standard vigilance implementation shows the medium and significant relation, which means the better the component of all social environment factor, the higher the nurse's standard vigilance implementation.

It is obtained the value of  $r = 0,235$  in the organization variable, which means the organization with the nurse's standard vigilance implementation shows the weak relation, which means organization does not shows significant relation with the nurse's standard vigilance implementation.

The leadership variable is obtained the value of  $r = 0,390$ , it means that leadership with the nurse's standard vigilance implementation shows the medium and significant relation, which means the better the leadership, the higher the nurse's standard vigilance implementation.

The group's climate and norm variable is obtained the value of  $r = 0,023$ , it means that the group's climate and norm with the nurse's standard vigilance implementation shows

weak or no significant relation, which the group's climate and norm do not influence the nurse's standard vigilance implementation.

For the communication variable, it is obtained the value of  $r = 0,136$ , it means that the relation of communication with the nurse's standard vigilance shows weak relation, which means the communication pattern does not show the significant relation to the nurse's standard vigilance implementation.

The working procedure / SPO variable is obtained the value of  $r = 0,196$ , it means the relation of working procedure / SPO with the nurse's standard vigilance implementation shows the weak relation, which means the relation of working procedure / SPO with the nurse's standard vigilance implementation does not show a significant relation.

## 4. Discussion

Standard vigilance is the infection control which is done by all health labor to reduce infection spreading and has the basic principle that blood and body liquid are potential in the disease transmission, either from the patient or the health officer [1]. Standard vigilance is designed to reduce the risk of disease infection on health officer, both the known and the unknown [2].

The research result shows that the factor of social environment which has the relation to nurse's standard vigilance implementation is leadership ( $p = 0,007$ ). The social environment factor which has no relation with the nurse's standard vigilance implementation is organization, group's climate and norm, communication, and working procedure / SPO.

The analysis result from 46 nurses show that the value of  $r = 0,235$ , which means no relation between organization and the nurse's standard vigilance implementation.

Nurse's perception toward leadership which is existed in each inpatient room to the nurse's standard vigilance implementation shows a significant relation between leadership and the nurse's standard vigilance implementation.

It is obtained the value of  $r = 0,390$  in the leadership variable, it means the relation of leadership with the nurse's standard vigilance implementation shows medium and positive pattern relation, which means the better the leadership, the higher the nurse's standard vigilance implementation.

For the group's climate and norm, it is obtained the value of  $r = 0,023$ , it means that the relation of group's climate and norm with the nurse's standard vigilance implementation show the weak or no significant relation, which means the group's climate and norm does not influence the nurse's standard vigilance relation implementation.

The communication variable is obtained the value of  $r = 0,136$ , it means the relation of communication with the nurse's standard vigilance implementation shows weak relation, which means the communication pattern does not influence the nurse's standard vigilance implementation.

The working procedure / SPO variable is obtained the value of  $r = 0,196$ , it means the relation of working procedure / SPO with the nurse's standard vigilance implementation shows a weak relation, which means the relation of working procedure / SPO less influence the nurse's standard vigilance implementation.

## 5. Conclusion

The research result shows that most influenced of social environment factor which has the relation with the nurse's standard vigilance implementation is leadership ( $p = 0,007$ ), while the social environment factor that has no relation with the nurse's standard vigilance implementation is organization, group's climate and norm, communication and working procedure / SPO.

## 6. Suggestion

It is recommended to the nurses, that they must do the nursing care as the standard operational procedure and always give attention to the standard vigilance. Therefore, the nurses must attempt to gain more knowledge in relation with the nurse's standard vigilance by knowing the standard vigilance, which is already set. For the Hospital, it is recommended to conduct training programs about standard vigilance continuously. For the further researcher, it is better that this research become the early data and the factor that is able to be dig deeper, especially the questionnaire which need to be sharpen, so it can reveal the relation of the studied factors.

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