

THE RELATIONSHIP BETWEEN ATTITUDES AND BEVARIOS OF DISEASE PREVENTION AMONG NURSES IN THE INPATIEN CARE UNIT AT HJ BUNDA HALIMAH HOSPITAL BATAM IN 2024

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ABSTRACT

Nurses are obliged to maintain their own health and safety, as well as ensuring that patients are safe. Nurses are a component of the infection transmission chain and can be included in susceptible hosts and places where infection-causing agents grow. This research technique uses analytical survey techniques using a cross-sectional study approach. The location of this research is Bunda Halimah Hospital and the research will be carried out in August 2024. The aim of this research is to determine the relationship between attitudes and infectious disease prevention behavior among nurses in the Inpatient Unit of Bunda Halimah Hospital, Batam. The population in this study were 49 nurses in the inpatient unit of Bunda Halimah Hospital, Batam. Using a total sampling technique because the population is less than 100. This research uses a questionnaire. This data processing uses univariate analysis, namely the total number of respondents and bivariate analysis is carried out using the Chi-Square test with the result p value = 0.003. Based on the confidence level value $\alpha = 0.05$, the result was that H_0 was rejected and H_a was accepted, meaning that there was a relationship between attitudes and behavior in preventing infectious diseases among nurses in the inpatient unit at Bunda Halimah Hospital, Batam. This research hopes that hospital management can provide parties who monitor the activities of nurses to prevent the occurrence of infectious diseases in inpatient rooms.

Keywords : Attitudes, Behavior, Prevention of Infectious Diseases

INTRODUCTION

The World Health Organization (WHO) states that a hospital is a healthcare institution with organized professional medical staff, inpatient facilities, and provides 24-hour services. It offers comprehensive care, disease treatment (curative), and disease prevention (preventive) to the public (WHO, 2017).

The World Health Organization (WHO) reports that out of 35 million healthcare workers worldwide, approximately three million are infected with viruses through blood each year. Two million of them are infected with HBV (Hepatitis B virus), 900,000 with HCV (Hepatitis C virus), and 170,000 with HIV. The increasing incidence of HBV and HIV infections has led to a rise in awareness of infections (Ministry of Health, 2017).

Southeast Asia has a relatively high rate of hospital-acquired infections. The prevalence of nosocomial infections in European and Middle Eastern countries is around 8.7%, while it is higher in Southeast Asia at about 10% (WHO, 2017). The most prevalent infectious diseases in Indonesia according to the Basic Health Research (RISKESDAS, 2018) are acute respiratory infections (ARI), tuberculosis (TB), hepatitis, and Human Immunodeficiency Virus (HIV) infections, which increase every year. These diseases pose a high risk of transmission in healthcare settings through airborne transmission, the presence of pathogenic microorganisms in the mouth including blood and saliva, and the possibility of needlestick injuries. Healthcare facilities must ensure health security for both healthcare workers and the served population because the spread of infectious diseases has been on the rise in recent years, such

as HIV and hepatitis B virus infections (Ministry of Health, 2017).

Based on previous research through statistical analysis using Chi-square analysis, it is known that the P-value = 0.000, which is smaller than $\alpha = 0.05$ ($P\text{-value} = 0.000 < \alpha = 0.05$). This indicates that there is a relationship between nurses' attitudes in preventing nosocomial infections in the inpatient ward of RSUD Cut Nyak Dhien, West Aceh Regency. Nurses with a positive attitude towards preventing nosocomial infections consist of 23 individuals (57.5%) who use personal protective equipment (PPE) and 17 individuals (42.5%) who do not use PPE, while nurses with a negative attitude consist of 3 individuals (8.3%) who use PPE and 14 individuals (82.4%) who do not use PPE. There is an influence of nurses' attitudes on the use of PPE in preventing nosocomial infections. Nurses with a positive attitude tend to use PPE. It also explains that the negative attitude, shown by refusing to use PPE because of discomfort, leads to a response of not using PPE. From the perspective of nurses' attitudes, they should be supported by good behavior related to the proper use of PPE, such as compliance in correctly using PPE when performing nursing procedures (Viny Pratiwi, 2021).

Factors influencing nurses' behavior and compliance in using personal protective equipment (PPE) include nurses' knowledge, motivation, availability of PPE, nurses' workload, attitudes, and length of service. This aligns with the findings of Ningsih (2018) that nurses with insufficient knowledge about PPE, totaling 23 respondents (76.7%), who lack knowledge, do not use PPE. On the other hand, respondents with good knowledge about PPE and who use PPE amount to 22 respondents (64.7%). Awareness of

the seriousness of Acquired Immunodeficiency Syndrome (AIDS) and hepatitis C is increasing, and how they can be infected at work, many healthcare workers do not perceive themselves at risk. Those at risk do not regularly use protective equipment, such as gloves, or other practices (handwashing) provided for them. According to Law No. 44 of 2009, hospitals are places of treatment, healthcare facilities that are a source of infection where sick people are treated. Hospitals are also where various diseases can originate from patients, nurses, doctors, and visitors, which can be carrier-borne (Ministry of Health Regulation, 2017). Infectious diseases are one of the health issues faced by the health sector in Indonesia today, which can occur in general healthcare services (Ministry of Health, 2017). The risk of infection can occur in hospitalized patients and also in healthcare workers in hospitals. When providing care to patients, healthcare workers may be exposed to pathogens originating from patients during procedures. Infections affecting healthcare workers can also impact the quality of hospital services (Aldiyani, 2017).

Healthcare workers in the inpatient ward are at high risk of disease transmission by pathogenic organisms through blood. Compliance with universal precaution is still low in clinics, leading to high risks. High infection rates in hospitals are an important indicator of the need for infection control efforts by implementing infection control standards (Standard Precautions). Standard Precautions are essentially a transformation of universal precautions, which are the first form of precaution aimed at preventing nosocomial infections (Saifuddin, 2020). In enhancing infection prevention efforts,

nurses' knowledge and attitudes towards using personal protective equipment (PPE) are necessary to avoid the risk of disease transmission from patients to nurses or among patients. Preventing infection transmission in healthcare facilities requires the implementation of procedures and protocols known as "controls." Hierarchically, this has been arranged according to the effectiveness of infection prevention and control (Infection Prevention and Control - IPC), which includes administrative controls, environmental controls and engineering, and personal protective equipment (PPE) (Suharmanto, 2020). Nurses are obligated to safeguard their own health and safety, in addition to ensuring the safety and comfort of patients. However, not many nurses pay attention to their own well-being while working in hospitals. Hence, many nurses neglect their safety by not using personal protective equipment, not washing hands before and after contact with patients, and more. Nurses are part of the infection transmission chain and can be considered vulnerable hosts and sites for the growth of infectious agents. A nurse with decreased immunity is at risk of infection while working, so nurses need to wash their hands and use personal protective equipment (gloves and masks) when working to prevent nosocomial infections (Aldiyani, 2017). Based on data from the Batam City Health Office in 2022, the highest number of confirmed cases of TB was found in Batam City, with 1,717 cases and a prevalence of 61%. The number of HIV cases was 538 with a prevalence of 70%. The number of confirmed Covid-19 cases was 31,802 with a prevalence of 71% (Health Profile of the Riau Islands Province, 2022). During the period of 2022-2023, there were 178 inpatients with Covid-19, 89 cases of TB, and 39 cases of HIV at RS Hj Bunda Halimah.

Additionally, there were 3 healthcare workers at RS Hj Bunda Halimah infected with Hepatitis and 3 cases of TB, and 43 confirmed cases of Covid-19.

On March 8, 2023, Hj Bunda Halimah Hospital in Batam was upgraded to Class B (Decree No. 0858/LAFKI/XII/2022). The hospital has a total of 100 nurses and 206 beds. The research will be conducted in 4 inpatient units with a total of 49 nurses, with 13 nurses in the Lavender ward, 11 in Gardenia, 12 in Orchide, and 13 in Jasmine (Human Resources Department of Hj Bunda Halimah Hospital, Batam, 2024).

Based on interviews and observations conducted by researchers in the Inpatient Ward of RS Hj Bunda Halimah from May 17 to May 20, 2024, involving 49 nurses, it was found that: 10 nurses, accounting for 20%, did not wash their hands after patient contact; 12 nurses, comprising 25%, used gloves but forgot to change them when moving from one patient to another; 12 nurses, also 25%, did not wear masks when entering isolation rooms; 5 nurses, making up 10%, did not use soap while washing hands; and 10 nurses, representing 20%, mentioned that using gloves sometimes made them uncomfortable and was a bit inconvenient.

Based on this phenomenon and the researcher's experience at Hj Bunda Halimah Hospital in Batam, there are still nurses displaying less adaptive attitudes towards efforts for preventing infectious diseases in the Inpatient Ward. Hence, the author was interested in conducting a study titled "The Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam."

RESEARCH METHOD

This research was conducted at RS HJ Bunda Halimah in Batam City in 2024 from May 17, 2024, to August 19, 2024. The study employed an analytic survey research design using a cross-sectional study approach. The population for this research consisted of 49 nurses, and a Total Sampling method was utilized, where the sample size equals the population size, resulting in 49 participants. In this study, the independent variable is the nurses' attitudes, while the dependent variable is the behavior of infectious disease prevention. The research instrument used in this study was a questionnaire administered to the respondents. Data analysis involved univariate analysis to determine the frequency distribution of independent or dependent variables and bivariate analysis to examine the relationship between independent and dependent variables. The data analysis was conducted using SPSS version 27 with the Chi-Square test. The data collection technique for this research encompassed three stages, including preparation, implementation, and final stages.

RESULTS AND DISCUSSION

1. Research Results

Based on the research titled "The Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam," the frequency distribution data of respondents is obtained from the research results as follows:

A. Univariate Analysis

This research investigates two characteristics of respondents: nurses' attitudes and nurses' behaviors, as shown in the table below.

Table 4.1
Distribution of Nurses'
Attitudes in the Inpatient Unit
at Hj. Bunda Halimah
Hospital, Batam City, 2024

Nurses's Attitudes	Frecuency (f)	Percentage
Negative	25	51,0%
Positive	24	49,0%
Total	49	100%

Table 4.1 indicates that among the nurses in the Inpatient Unit at Hj. Bunda Halimah Hospital in Batam City, the majority displayed a negative attitude, with 25 nurses (51.0%), while 24 nurses (49.0%) exhibited a positive attitude.

Table 4.2
Distribution of Frequency of
Infectious Disease Prevention
Behaviors Among Nurses in
the Inpatient Unit at Hj Bunda
Halimah Hospital in Batam
City, 2024

Nurses's Behavioral	Frequency (f)	Percentage
Good	23	46,9%
Less Good	26	53,1%
Total	49	100%

Berdasarkan Tabel 4.2 menunjukkan bahwa sebagian besar Perilaku perawat Baik dengan jumlah 23 orang (46,9%) dan perilaku kurang baik 26 orang (53,1%).

B. Bivariate Analysis

Bivariate analysis is used to identify the relationship between two variables, namely the independent variable and the dependent variable. In this analysis, two measurements are taken for each observation. In bivariate analysis, the samples

used can be paired or independent with their treatments. Bivariate analysis is the type of analysis used based on the conditions of the variables. This seemingly simple analysis can yield very useful tests. The bivariate analysis in this research aims to determine the Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam. The statistical test used is the chi-square test.

Table 4.3
The Relationship Between
Attitudes and Behaviors in
Preventing Infectious Diseases
Among Nurses in the Inpatient
Unit at RSBH

Perilaku							
Kurang Baik			Baik		Total		
Sikap	f	%	f	%	f	%	p value
Negatif	19	76.0	6	24.0	25	100.0	0.003
Positif	7	29.2	17	70.8	24	100.0	
Total	26	53.1	23	46.9	49	100.0	

Based on Table 4.3, out of the 49 respondents studied, the frequency of nurses with a negative attitude and poor behavior was 19 respondents (76%). The frequency of nurses with a negative attitude and good behavior was 6 respondents (24%). For nurses with a positive attitude and poor behavior, the frequency was 7 respondents (29.2%). The frequency of nurses with a positive attitude and good behavior was 17 respondents (70.8%). The chi-square test results showed a p-value of 0.003. Since the significance

value of 0.003 is less than 0.05, H_a is accepted, indicating that there is a relationship between Nurses' Attitudes and Infectious Disease Prevention Behaviors in the Inpatient Unit of Hj Bunda Halimah Hospital in Batam City in 2024.

DISCUSSION

1. Nurses' Attitudes in the Inpatient Unit

Based on the research findings, out of the 49 respondents studied, the frequency of nurses with a negative attitude was 25 respondents (51%), while those with a positive attitude were 24 respondents (49%). This indicates that nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City still lack the implementation of a positive attitude in understanding how to apply infectious disease prevention measures in the inpatient environment. These research results are consistent with studies conducted by Vinny Pratiwi (2021) on the Identification of Nurse Behavior in Preventing Nosocomial Infections in the Inpatient Ward of RSUD Cut Nyak Dhien, West Aceh Regency, where some respondents fell into the category of nurses' attitudes with 40 individuals (52.6%). Similarly, research by Sulistyowati Dwi (2016) on the Relationship Between the Level of Knowledge and Attitudes of Nurses Regarding Nosocomial Infections (NI) with Preventive Behavior in the Operating Room of Dr. Moewardi Surakarta, where some respondents fell into the category of nurses' attitudes with 15 individuals (50%).

Several factors can influence nurses' attitudes, including experience, influence of others,

culture, mass media/social media, educational institutions, religion, and emotional factors (Wawan, 2020).

Many nurses do not agree and are less supportive in performing preventive actions against infectious diseases. For example, some nurses dislike having to sterilize washed instruments, dispose of medical waste in yellow bins, dispose of non-medical waste in black bins, directly handle dirty linens with their hands, and do not see the need to wash hands before and after direct contact with patients. Nurses with positive attitudes have the belief, ability, and tendency to implement universal precautions for all patients, regardless of the disease or diagnosis, to prevent the transmission of infections through blood and body fluids. Most nurses agree on preventing infectious diseases, such as always using disposable gloves when handling exudate, wearing masks, gowns, and goggles when there are splashes and contact with infectious fluids, proper handwashing techniques using aseptic methods, using gloves when there are skin wounds or cuts, and wearing gloves when inserting an IV to avoid the risk of contracting infectious diseases.

In conclusion, based on the research results, having nurses with positive attitudes towards infectious disease prevention behaviors in the inpatient unit can help reduce or prevent the occurrence of infectious disease prevention behaviors in the Inpatient Unit.

2. Disease Prevention Behavior

Based on the research results from the 49 respondents studied, the frequency of respondents shows that

the majority of nurses exhibit Good behavior, with 23 individuals (46.9%), and poor behavior with 26 individuals (53.1%).

These research findings align with those conducted by Sulistyowati Dwi (2016) on the Relationship Between the Level of Knowledge and Attitudes of Nurses Regarding Nosocomial Infections (NI) with Preventive Behavior in the Operating Room of Dr. Moewardi Surakarta, where some respondents exhibited poor behavior, totaling 12 individuals (40%).

Behavior is influenced by several factors such as knowledge, intelligence, perception, emotions, motivation, and others that function to process external stimuli. The most important basic technique in preventing and controlling the transmission of infectious diseases is handwashing. Handwashing involves rubbing with soap all surfaces of the hands vigorously and succinctly, followed by rinsing under running water (Sulistyowati Dwi, 2016).

In this research, the preventive behaviors against infectious diseases carried out by nurses are based on knowledge, awareness, and positive attitudes. These behaviors can become habits or long-lasting if based on knowledge, attitudes, and awareness. Conversely, if behavior is not based on knowledge, attitudes, and awareness, it will not last long.

The relationship between attitude and behavior is not yet conclusive. Many studies conclude a very weak or even negative relationship, while others find a convincing relationship. Although a person's attitude may be positive, it does not necessarily mean their

behavior will be good because behavior is influenced by various factors such as knowledge, intelligence, perception, emotions, motivation, and others that process external stimuli (Notoatmodjo, 2019). Attitude towards a behavior is influenced by the belief that the behavior will lead to desired or undesired outcomes (Azwar 2017).

In conclusion, based on the research results, it can be inferred that the higher number of nurses exhibiting poor behavior is due to a lack of education, training, and strict monitoring in implementing preventive measures against infectious diseases in the inpatient ward. It is advisable to conduct seminars every six months to review infectious disease prevention, educate on handwashing, proper waste disposal, and have field supervisors monitoring nurses to prevent poor behavior in preventing infectious diseases in the inpatient unit.

3. The Relationship Between Nurses' Attitudes and Disease Prevention in the Inpatient Unit

A research study was conducted from May 17, 2024, to August 19, 2024, involving 49 respondents to examine the Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024.

From the study results, out of the 49 respondents, the frequency of nurses with a negative attitude and poor behavior was 19 respondents (76%). The frequency of nurses with a negative attitude and good behavior was 6 respondents (24%). For nurses with a positive attitude

and poor behavior, the frequency was 7 respondents (29.2%), while the frequency of nurses with a positive attitude and good behavior was 17 respondents (70.8%). These results were consistent with the statistical Chi-Square test, which yielded a p-value of 0.003 (p-value < 0.05). This indicates a significant relationship between the Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024.

The findings of this study align with research conducted by Vinny Pratiwi (2021) on the Identification of Nurse Behavior in Preventing Nosocomial Infections in the Inpatient Ward of RSUD Cut Nyak Dhien, West Aceh Regency, with a p-value of 0.000 (p-value < 0.05), indicating a significant relationship between nurses' attitudes and nosocomial infection prevention in the inpatient ward.

Many nurses are less supportive in implementing infection prevention measures, such as their reluctance to sterilize washed instruments, disposal of medical waste in yellow bins, disposal of non-medical waste in black bins, incorrect practices like directly handling dirty linens with hands, lack of attention to instrument sterility during invasive procedures, and skipping handwashing before and after direct patient contact.

Good nurse attitudes involve beliefs, abilities, and inclinations to implement universal precautions for all patients regardless of their disease or diagnosis to prevent infection transmission through blood and body fluids. Most nurses

agree and support preventive measures against infectious diseases, such as always using disposable gloves when handling exudate, wearing masks, gowns, and goggles for splash and contact with infectious fluids, proper handwashing techniques, using gloves for skin wounds, and wearing gloves during IV insertion to prevent the risk of infectious diseases. Based on the research findings with a p-value of 0.003 < 0.05, it can be concluded that there is a relationship between attitudes and behaviors in preventing infectious diseases among nurses in the inpatient unit at Hj Bunda Halimah Hospital in Batam City in 2024.

CONCLUSION AND RECOMMENDATIONS

1. Conclusion

Based on the research on "The Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024":

- a. The frequency distribution of nurses' attitudes towards infectious disease prevention shows that more than half fall into the good category in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024.
- b. The frequency distribution of nurses' behaviors in infectious disease prevention shows that more than half fall into the good category in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024.

- c. There is a significant relationship between nurses' attitudes and behaviors in preventing infectious diseases in the Inpatient Unit at Hj Bunda Halimah Hospital in Batam City in 2024.

2. Recommendations

- a. For Educational Institutions
The research findings can be used as additional references in Nursing Management learning materials regarding the Relationship Between Attitudes and Behaviors in Preventing Infectious Diseases Among Nurses
- b. For Hj Bunda Halimah Hospital
It is recommended to provide education, training, and monitoring to all healthcare professionals, especially nurses in the inpatient unit, to better understand and implement infectious disease prevention. The hospital management should establish a committee or IPC team responsible for conducting activities, assessments, planning, implementation, monitoring, evaluation, and guidance for nurses to prevent infectious diseases in the inpatient ward.
- c. For Future Researchers
The research results obtained can serve as fundamental data and information for future researchers. Future studies could explore other factors such as predisposing factors, enabling factors, and reinforcing factors related to preventive behaviors against infectious diseases.

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