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Analysis of Factors Affecting the Role of Nurses in Application Patient Safety at Hospital Royal Prima Medan

Bobby Susilo[1], Ermi Girsang[2], Sri Wahyuni Nasution[3]
[1, 2, 3]Master Public Health Faculty of Medical, Universitas Prima Indonesia, Medan, North Sumatera, Indonesia

Abstract**—** *From the results of the Patient Safety Committee report at the Royal Prima Hospital Medan, one of the causes of KTD was the wrong identification made by hospital health workers. Patient safety incident data in 2017 reports an analysis of the causes of incidents of errors in drug administration due to ineffective communication resulting in medication errors, besides that the procedure was not carried out correctly. To avoid mistakes in patient identification, a patient identification bracelet is needed to help identify the patient. Every patient in the hospital has the right to be correctly identified. This study aims to analyze the factors that influence the behavior of nurses in the context of implementing patient safety at the Royal Prima Medan Hospital Inpatient in 2018. This type of research is cross-sectional. The sample in this study were nurses in the Bougenvillle, Crysant, Edelweis, and Aster nursing rooms, with as many as 51 respondents. Data were analyzed using Chi-Square and Logistic Regression. The results showed that there was a significant effect between knowledge (p ± value = 0.008), attitude (p ± value = 0.000), facilities (p ± value = 0.000), and work experience (p ± value = 0.002) on the behavior of nurses in the context of implementing patient safety at the Royal Prima Hospital Inpatient Medan in 2018. And after performing multiple logistic tests from 3 models, it was found that the most dominant factor influencing the behavior of nurses in the context of patient safety was the attitude with an exponent value of B 87,535 with a p-value of 0.001.*

Keywords**—** *Knowledge, Attitude, Facilities, Work Experience, and Patient safety*.

I. INTRODUCTION

Secure. Patient safety is a fundamental principle of health care. Several high-income countries have published studies that show a significant number of patients are harmed during health care, either resulting in permanent injury, increased length of stay in health care facilities, or even death. According to a new study, medical errors are the third leading cause of death in the United States. In the UK, recent estimates suggest that, on average, one patient injury incident is reported every 35 seconds. Similarly, in low- and middle-income countries, the combination of many unfavorable factors such as shortages, inadequate structures and overcrowding, lack of health care commodities and needs of essential equipment, and poor hygiene and sanitation contribute to bad patient care. A weak safety and quality culture, flawed care processes, and disinterested leadership teams further undermine healthcare systems and organizations' ability to ensure the provision of safe health care (WHO, 2016).

Incidents Patient safety is still a significant problem in hospitals where various services have risks that threaten patient safety in hospitals. Hospital Patient Safety is a system where the hospital makes patient care safer, which includes: Assessment/risk assessment, identification, and management of matters relating to patient risk, incident reporting and analysis, ability to learn from incidents and actions he continued as well as implementing solutions to minimize risks and for this, the government has tried to prioritize patient safety in hospital services (Rsudza, 2017).

Errors due to patient identification errors often occur in almost all aspects or stages of diagnosis and treatment, so accurate patient identification is needed. Concern for correct patient identification has been demonstrated in the 2013 National Patient Safety Goals; patient identification is the first patient safety goal. A related recommendation also states that there are at least two data sets for patient identification, excluding patient rooms. JCAHO (Joint Commission on Accreditation of Healthcare Organizations) publishes several reports of sentinel events resulting from errors in patient identification. The event is classified as a type of mispositioning operation. The JCAHO report shows that 13% of patients with the wrong surgical position occur in the wrong patient. Incorrect identification results in the patient undergoing an improper procedure. One such error was reported in an article entitled “The Wrong Patient.” In this article the author describes a 67-year-old woman who underwent an invasive cardiac procedure that she should not have done, which was due to a health worker error in carrying out the procedure, misidentifying her (Beyea, S.C., 2013).

Patient identification errors can occur in all aspects of diagnosis and treatment. Several circumstances can lead to errors/errors in identifying the patient, including the patient being anesthetized or sedated; being disoriented, or not fully conscious; allows to swap beds, rooms, locations within the hospital; may have sensory disabilities; and the consequences of other situations. Efforts to achieve excellent and correct patient identification require a method or method that can be trusted/reliable. Therefore the hospital must develop an approach to improve or increase the accuracy of patient identification.

Although patient identification errors are relatively not too frequent, the impact that occurs is often fatal, for example, death and as a trigger for other errors. Patient identification errors are very likely to occur, especially in hospital services. This involves several factors such as complexity in service and

the limitations of officers (physical and mental). Every day, thousands of laboratory workers process specimen examination, both in the preanalytic phase (collection, marking, collection, interpretation of requests), analytic (sample processing), and post-analytic. Several tens of thousands of activities in a day must be carried out by all nurses, radiologists, and pharmacists, all of which require staff and patient interaction.

Nurses in providing nursing care to patients must implement patient safety. Nurses must involve cognitive, affective, and actions that prioritize patient safety. Nurses in providing nursing care must be full of care. The attitude of nurses to maintain patient safety plays a vital role in the prevention, control, and improvement of patient safety (Hutchinson, 2011).

Internal and external factors influence nurses in carrying out patient safety. Internal factors are innate characteristics of nurses identified in intelligence level, emotional level, and personal experience. External factors that influence the behavior of nurses are the environment, such as the influence of other people who are considered essential or leadership, culture, and organizational systems. This factor is often the dominant factor that colors a person's behavior (Notoatmojo, 2012). External factors in the form of the influence of other people can also lead to nurses' attitudes towards the implementation of patient safety.

The behavior of nurses who do not maintain patient safety contributes to patient safety incidents. Nurses who do not know the rapidly deteriorating situation fail to recognize what is happening and ignore crucial clinical information that occurs to the patient can threaten patient safety. Unsafe behavior, forgetfulness, inattention, motivation, carelessness, and fatigue are at risk for subsequent errors, and error reduction can be achieved by modifying behavior (Choo et al., 2010).

II. LITERATUR REVIEW

Patient safety is a fundamental principle of health care (WHO). According to Sunaryo (2009), patient safety is the absence of errors or freedom from injury due to accidents. Patient safety in hospitals is a system where hospitals make patient care safer, including risk assessment, identification, and management of patient risk, reporting, and incident analysis. The ability to learn from incidents and follow-up and implement solutions to minimize risks and prevent injuries caused by errors resulting from carrying out an action or not taking action should have been taken (Depkes RI, 2011).

2.1. Patient Safety Standards

The importance of patient safety in hospitals, so patient safety standards are made in hospitals. Patient safety standards in this hospital will be a reference for every care given to patients. According to the Indonesian Ministry of Health (2011), there are seven patient safety standards, namely:

a. Patient rights
b. Educating patients and families
c. Patient safety in the continuity of service. Use of performance improvement methods to evaluate and improve patient safety programs
e. The role of leadership in improving patient safety
f. Educate staff about patient safety
g. Communication is vital for staff to achieve patient safety.

2.2. Patient Safety Goals

Apart from safety standards, there is another crucial point in implementing patient safety, namely patient safety goals or Patient Safety Goals. The patient safety goal is required to be applied in all hospitals accredited by the hospital accreditation commission. The setting of this target refers to the Nine Life-Saving Patient Safety Solutions from WHO Patient Safety (2007) which is also used by the PERSI Hospital Patient Safety Committee (KKPRSI) and the Joint Commission International (JCI).

According to the Joint Commission International (2013), there are six patient safety goals, namely:

a. Correct patient identification
b. Improve effective communication
c. Improving the safety of drugs that need to be aware
d. Certainty right location, proper procedure, correct patient operation
e. Reducing the risk of infection related to health services
f. Reduction of the patient's risk of falling.

2.3 Patient Identification

2.3.1 Definition

Identification is the application or determinant or characteristics, or complete information of a person (Hamzah, 2008). Patient identification is an effort or effort made in a health service as a process that is consistent. This procedure has a policy or has been agreed upon, fully applied, followed, and monitored to obtain data that will be used in improving the identification process (Joint Commission International, 2007).).

2.3.2 Purpose and objectives of patient identification

The hospital continues to develop approaches to improve or increase the accuracy of patient identification. Patient safety goals (SKP) aim to encourage specific improvements in patient safety, become one of the problematic areas in the delivery of health services, and outline solutions to these problems. The efforts made are by implementing six patient safety goals.

Patient identification is one part of the six patient safety goals that are very important in success and preventing problems that arise due to wrong actions, drug administration, and services provided.

2.3.3 Elements of patient identification

In identifying patients, there are several elements of assessment, including:

a. Patients are identified using two patient identities, may not use room numbers or patient locations
b. Patients are identified before administration of drugs, blood, or blood products
c. Patients are identified before taking blood and other specimens for clinical examination

d. Patients are identified before administering medication and actions or procedures
e. Policies and procedures direct the consistent implementation of identification in all situations and locations.

2.3.4 Strategies in patient identification

Failures that often occur when identifying patients will lead to administering drugs, carrying out procedures, clinical examinations on the wrong person. To minimize this risk, the WHO Collaborating Center for Patient Safety Solutions publishes nine Hospital Patient Safety solutions (World Health Organization, 2007), where the second solution is patient identification. The strategies offered inpatient identification are:

a. Ensure that the health organization has a patient identification system
1) Emphasizes that it is the nurse's responsibility before performing a treatment, medication, specimen collection, or clinical examination to ensure the correct identity of the patient.
2) Encourage the use of at least two identities (name and date of birth)
3) Standardize the approach to patient identification between different facilities in the health care system
4) Provide clear protocols to identify patients and to differentiate the identity of patients with the same name
5) Encourage patients to participate in all stages of the hospital care process
6) Encourage labeling of containers used for taking blood and other specimens
7) Provide clear protocols to maintain patient sample identity in pre-analytical, analytical, and post-analytical processes.
8) Provide a clear protocol for questioning laboratory results or other test findings when they are inconsistent with the patient's clinical history
9) Provide repeated checks and reviews to prevent automatic multiplication of computer entry errors.
b. Incorporate into the training program or orientation of health workers on procedures for examination/verification of patient identity.

2.4 Health Behavior

2.4.1 Definition

Health behavior is a person's response to a stimulus or object related to health-illness, disease, and factors that affect health-illness (health) such as the environment, food, drink, and health services. In other words, health behavior is all activities or activities of a person, both observable (observable) and unobservable (unobservable), related to the maintenance and improvement of health (Notoatmodjo, 2014).

2.4.2. Behavior forming procedure

Behavior formation procedures, according to Skinner in Asmuji (2014), include the following:

a. Identifying reinforcers or Reinforcers in the form of gifts or rewards for the behavior that is formed.
b. Analyze to identify the small components that make up the desired behavior. The details are arranged in the correct order to lead to the formation of the intended behavior.
c. By sequentially using the components as interim goals, identify the Reinforcer or reward for each component.
d. Conduct behavior formation by using the ordered component sequence.

III. METHOD

Before the questionnaire sheets were distributed to respondents, validity and reliability tests were carried out first (Sugiyono, 2014).

1. Validity test is a measuring instrument used to obtain valid data (measure). Valid means that the device can measure what is being measured.

A validity test is used to measure the validity or validity of a questionnaire. A questionnaire is said to be valid if the questions on the questionnaire can reveal something that the questionnaire will measure. So fact wants to measure whether the questions in the questionnaire that the researchers have compiled can measure what they want to measure.

The measurement of the level of validity in this study was carried out using a correlation between the score of the questions and the total score of the construct or variable. In this case, correlate each question score with the total score, with the hypothesis:

Ho: The score of the question items is positively correlated with the total construct score
Ha: The score of the question items is not positively correlated with the total construct score

The significance test is carried out by comparing the calculated r-value with the r table value for the degree of freedom (df) = n-k. In this case, n is the number of samples, and k is the number of constructs. If r count (for r each item can be seen in the Corrected item column - the total correlation is more significant than r table, and the value of r is positive, then the thing or question is said to be valid.

2. Reliability is an instrument which, when used several times to measure the same object, will produce the same data.

The reliability test is intended to measure how far the respondents provide consistent answers to the questionnaires given. Reality is a tool to measure a questionnaire which is an indicator of a variable or constructs. A reliable or reliable questionnaire if a person's answer to the statement is consistent or stable over time. Respondents' answers to questions are reliable if each question is answered consistently, or the answers cannot be random because each question wants to measure the same thing.

Measurement of reliability in this study was carried out using one-shot or measurement only once. Here the size is only once, and then the results are compared with other questions or measure the correlation between the answers to the questions. The data processing program on the computer provides facilities for measuring reliability with the Cronbach alpha statistical test. A construct/variable is said to be reliable if it gives a Cronbach alpha value > 0.60.

A try-out of the questionnaire to test the validity and reliability of the questionnaire was conducted at Rumah Mayang Medical Center (MNC) on 20, hoping that the distribution of scores would approach the standard curve. The purpose of this trial is to avoid any difficult questions or the

shortcomings/advantages of the questionnaire material and test the validity and reliability of the questionnaire.

IV. Analyzed and Result

Based on the research objective, namely to determine the factors that influence the role of nurses in the context of implementing patient safety in the Inpatient Royal Prima General Hospital, Medan in 2019. The analysis of this study was carried out in three ways, namely univariate, bivariate and multivariate analysis. In the univariate analysis, the frequency of each variable will be seen and in the bivariate analysis the influence between the independent variable and the dependent variable will be seen, while the multivariate analysis shows the most dominant results affecting the dependent variable.

4.1. Characteristics of Respondents

TABLE 1. Characteristics of Respondents Based on Age No Characteristics Age

No	Characteristic Years	Ages
1	Min	25 Years
2	Max	31 Years
3	Mean (rata-rata)	28 Years

Based on table 1 the characteristics of respondents based on age, it is known that the youngest age of nurses working at Royal Prima Hospital is 25 years, while the highest age is 31 years and the average respondent is 28 years old.

According to Notoatmodjo (2014), Knowledge is an impression in the human mind as a result of the use of the five senses, which is very different from belief (beliefs), superstition (superstition), and misinformation. Knowledge is the result of remembering something, including recalling events experienced either intentionally or unintentionally. This occurs after people make contact or observations of a particular object. According to Jann and Donald in their book Knowledge Management (Ariyani 2009), it is stated that knowledge obtained from a collection of information that is interconnected systematically so that it has meaning.

Based on the results of the study, it was shown that of the 20 respondents who had insufficient knowledge, there were eight respondents (40.0%) who performed the role as a nurse well, while of the 31 respondents who had high knowledge, there were 6 respondents (19.4%) who had a poor role as a nurse. The results of the statistical test showed the value of p - value = 0.008 ($p < 0.05$) in other words, there was a significant influence between knowledge on the role of nurses in the context of implementing patient safety at the Royal Prima Medan General Hospital Inpatient in 2019.

The picture of nurses' knowledge about patient safety in each room is good, this is shown by the results of the study which show that each respondent's knowledge is good with a total of 60.8%. Based on observations made by researchers, it is known that the above description is influenced by nurses' compliance with the Standard Operating Procedures (SOPs) that have been given, the role of leadership (hospital head nurses) who continue to monitor and evaluate the actions taken by each implementing nurse, and communication The good thing is that the head of the room and the implementing nurse is also between the implementing nurses in all inpatient rooms. So from the results obtained, it can be concluded that the higher a person's knowledge, the better in implementing patient safety.

There is a relationship between the level of knowledge of nurses about patient safety with the practice or implementation of patient safety programs in line with Lawrence Green's behavioral theory which states that knowledge is included in predisposing factors that will affect a person's health practice (Notoatmodjo, 2014).

Knowledge is the result of knowing and this occurs after people have sensed certain objects. Determination of attitudes based on knowledge and awareness will be more firmly embedded in their personality, compared to attitudes that are not based on knowledge or concepts they understand. Before a person takes a position he must first know what the benefits of that action are for himself and his organization. One way to increase knowledge that is useful for improving employee effectiveness in achieving work results set for patient safety and satisfaction is by conducting socialization.

The results of this study are in accordance with Ekawati's (2015) research. Based on the Chi Square Test conducted, a p-value of 0.000 (0.05) was obtained, which means H0 is rejected and Ha is accepted. So it can be concluded that statistically it shows that there is a relationship between knowledge and practice, in this case related to patient safety. There is a positive relationship shown by the results of statistical tests where the results illustrate that the higher the score obtained for the level of knowledge of nurses regarding patient safety, the higher the score obtained for the practice of implementing patient safety by nurses.

This is in accordance with several related studies, one of which is a study conducted by Sri (2010) entitled "Development of Patient Safety Programs Based on the Analysis of the Effect of Knowledge, Perception, Awareness, Commitment and Teamwork Effectiveness on the Performance of Patient Safety Implementation". , perception, awareness, commitment and effectiveness on the implementation of Patient Safety

According to the researcher, a good nurse's knowledge is influenced by internal factors that exist within the nurse herself. Nurses know, understand and apply the knowledge they have gained. This good knowledge of nurses allows nurses to provide information needed by clients and their families in accordance with their role as sources of information (consultant) and ensure patient safety is maintained (patient safety). The desire of nurses to continue to grow and continue to strive to provide optimal nursing care can motivate nurses to continue to improve their knowledge, in this case, knowledge in the context of implementing patient safety.

V. Conclusion

From the results of research and discussion, the following conclusions can be drawn:

- There is a significant effect between knowledge on the role of nurses in the context of implementing patient safety at the Royal Prima Hospital Inpatient Medan in 2019 p value = 0.008 ($p < 0.05$)

- There is a significant effect between attitudes towards the role of nurses in the context of implementing patient safety at the Royal Prima Hospital Inpatient Medan in 2019 p value = 0.000 (p < 0.05)
- There is a significant influence between the facilities on the role of nurses in the context of implementing patient safety in the Royal Prima Hospital Inpatient Medan in 2019 p value = 0.000 (p < 0.05)
- There is a significant effect between work experience on the role of nurses in the context of implementing patient safety at the Royal Prima Hospital Inpatient Medan in 2019 p value = 0.002 (p < 0.05)
- By paying attention to the value of exponent B and the significance value of models 1, 2 and 3, it can be concluded that the most influential on the role of nurses in the context of patient safety is attitude with an exponent B value of 87,535 with a p value of 0.001.

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