

REVIEW ARTICLE

NURSE IMPLEMENTATION IN PREVENTING THE RISK OF FALL IN HOSPITAL: LITERATURE REVIEW

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ABSTRACT

Falls are one of the most critical patient safety incidents. This must be prevented as it will have the side effect of injury. Patient safety incident prevention is a system that makes patient care safer, minimizes risk, and prevents injury. However, the system has not been fully implemented so patient safety incidents still often occur and the incidence of patient falls is still high. The purpose of this study was to identify the application of patient safety by nurses in preventing the risk of falling in the hospital. This study uses a literature review method from Pubmed and Google Scholar sources. Search using advanced search with predefined keywords. The search results obtained 13,373 articles, then were assessed for feasibility, categorized, and adapted to the research theme. 20 selected articles were used for research. Nurses are responsible for providing safe nursing services. Patient identification, effective communication, monitoring of medication administration, and assessment of falls should be performed. The implementation of the professional organization model makes it easier for nurses to prevent falls with the Morse Fall Scale guide and the Auto-FallRAS system from EMR. Nurses are more critical, reflective, and caring in making decisions and solving the problems of falling patients. Safety culture must be continuously improved so that the risk of falling incidents can be minimized. Nurse implementation in preventing the risk of falls in hospitals can reduce the incidence. This can also improve the quality of service in hospitals.

Keywords: Patient safety, nursing services, patient fall prevention

INTRODUCTION

The hospital is a health service institution that provides complete health services and has a high risk of patient safety. Thus, it is necessary to organize health and safety to create healthy, safe, and comfortable hospital conditions on an ongoing basis. Hospitals have a dominant focus on providing health services to meet, maintain and promote public health needs to meet patient satisfaction when hospitalized (Oktavianti, 2019). Patients who are hospitalized have the right to get safe patient care through a system that can prevent unexpected events or adverse events. All health workers must work together and be committed to meeting patient needs, thereby improving service quality and cost-effectiveness (Asmirajanti et al., 2018). Awareness of this underlies the implementation of the patient safety program to prevent unexpected events from occurring in patients being treated. In this case, it is necessary to develop leadership and hospital culture which includes patient safety and improving the quality of services in hospital health service facilities (Marpaung, 2019).

Improving the quality of health services is carried out by directing all components of health services, especially nurses. The provision of

services must comply with safety standards to protect patients from risks that may occur. Patient safety standards provide benefits for the application of patient safety measures. By applying these standards, nurses can meet the needs of patients by providing good nursing services (Syahputri, 2019). The nursing profession is a professional who plays an important role in the function of the hospital. This is based on the number of nurses as the largest portion of hospital services. Nurses are also part of a team, which includes a variety of other professionals. Nurses as a component that play an important role in reporting service errors in supporting patient safety programs (Saputri, 2019). Patient safety is a system that makes patient care safer which includes risk assessment, identification, and management of matters relating to patient risk, incident reporting, and analysis, the ability to learn from incidents, and their follow-up and implementation of solutions.

This is to minimize the risk and prevent injury caused by mistakes due to acting or not taking the action that should have been taken. One of the goals of patient safety is to reduce the number of patient safety incidents (IKP). A patient safety

incident is any unintentional event and condition that can cause preventable injury to a patient (Sembiring, 2020).

Reporting of patient safety incidents in Indonesia by province conducted by the Hospital Patient Safety Committee in 2007, it was found that DKI Jakarta province was in the top position, namely 37.8% among eight other provinces (Central Java 15.9%, Yogyakarta 13.9%, East Java 11.7%, Aceh 10.7%, South Sumatra 6.9%, West Java 2.8%, Bali 1.4%, and South Sulawesi 0.7%) (Insani & Sundari, 2018). Patient safety is something that is far more important than just service efficiency. Nurses must involve cognitive, affective, and actions that prioritize patient safety. Collected hospital research figures in various countries, and found adverse events with a range of 3.2 - 16.6%. incidents of patient safety violations 28.3% were carried out by nurses (Lombogia et al., 2016). Nurses are one of the service providers who are at risk of making mistakes in patient safety because patient safety standards are generally applied by nurses, especially in the prevention of patient falls. Standard operating procedures as the right reference for implementing patient safety (Maulidiawati et al., 2017). The majority of health workers in hospitals are nurses (40-60%), who are obliged to implement patient fall prevention. As the spearhead of health services, nurses need to improve their knowledge and skills in preventing patient falls (Maulina & Febriani, 2015).

In a study conducted (Morris & O'Riordan, 2017) it was found that patient falls incident report data, as many as 250,000 people experience an incident every year in British and Wales hospitals, 30-50% of them cause physical injury 1-3% cause fractures. According to (Hiyama, 2017) it is known that the incidence of falls is up to 19.3% with 10% of the total patients experiencing serious injury or death. In the PERSI XII congress report data throughout 2012, as many as 34 incidents, or the equivalent of 14% of incidents fell in hospitals in Indonesia. This is evidence that the incidence of patient injury due to falls is still high and far from the accreditation standard which states that it is not expected to occur in the hospital or 0% incidence (Nur et al., 2016). Nurse compliance to prevent patient safety incidents is needed (Faridha & Milkhatun, 2020). Based on the things above, the purpose of the research identifies the application of patient safety by nurses in preventing the risk of falling in hospitals.

METHOD

This study uses a literature review method from Pubmed and Google scholar sources to find out

how nurses implement patient safety in fall prevention. Search using advanced search with the addition of "AND/OR" notation. The keywords used in the search for research articles were "patient safety" AND "fall risk", "nursing services" AND "fall prevention", "the role of the nurse", AND "fall prevention". The search was carried out on the full article in pdf format. Articles for 2016 - 2021, using a quantitative, qualitative, and mixed-method study approach.

Inclusion and exclusion criteria were determined according to the PICO search strategy, namely, the problem was safety, the intervention was the application of patient safety, there was no comparison and the outcome was the risk of falling. The search results obtained 13,373 articles, then the articles were assessed for feasibility, categorized, and adapted to the research theme. 20 selected articles were used for research.

RESULTS

Based on the review that has been done by the author regarding the identification of patient safety applications, Efforts to prevent the risk of falling and the application of patient safety by nurses in preventing the risk of falling in hospitals are as follows:

Table 1. shows that nurses are responsible for providing safe nursing services. Patient identification, effective communication, monitoring of drug administration, and performing a fall assessment must be carried out by nurses. They have to make decisions and solve problems. Patient safety incidents must be minimized by implementing a professional organizational model, cultivating patient safety, and making reports of each incident. The better the patient safety culture, the better the quality of nursing care.

Table 2. shows that there are still nurses who have not implemented fall prevention by the established SOP. Nurses must have a critical and reflective attitude in assessing falling patients. It uses the Morse Fall Scale guide and the Auto-FallRAS system from Electronic Medical Records. Caring for nurses is also very necessary for assessing falls, taking preventive measures, installing stickers on beds, and providing education on the risk of falls. However, the high workload and the large ratio of the number of patients that must be served resulted in nurses being less able to meet the needs and monitoring of patients.

Table 1: Implementation of Patient Safety by Nurses in Hospitals

Reference	Title	Method	Results
(Akwilina Ritarni Anseli Soru, 2018)	Implementation of patient safety goals	Descriptive, samples of nurses	16 Nurses are responsible for providing safe nursing services for patients. They should be encouraged to implement specific patient safety goals.
(Insani & Sundari, 2018)	Analysis of the implementation of patient safety by nurses	Mixed Method, samples of nurses for quantitative data and 4 nurses for qualitative data.	32 The implementation of patient safety at Queen Latifa General Hospital has been going well from time to time, but only a few patient safety activities have been carried out, namely: identifying patients, communicating effectively, and monitoring drug administration.
(Widiasari et al., 2019)	Patient satisfaction with the implementation of patient safety in hospitals	Cross-sectional, patient samples.	143 Nurses carry out therapeutic communication and provide a sense of security in the hospital environment to reduce patient safety incidents.
(Dubois et al., 2013)	Assessment of patient safety associations on the organization of nursing care models at the unit level in hospitals.	Cross-sectional, 22 medical rooms which are divided into 4, namely 2 professional models and 2 functional models	Based on the results of the assessment of the 4 organizational models used, namely 2 professional and 2 functional. The incidence of patient safety in the implementation of the professional organization model was significantly lower by 25-52% than in the functional organization model. The incidence rates for the two functional models were statistically indistinguishable from each other.
(Suryanto, 2018)	The relationship between patient safety culture and reporting of patient safety incidents by nurses in hospital inpatient rooms.	Cross-Sectional. sample nurses	112 A good patient safety culture will increase nurse reporting for patient safety incidents.
(Françolin et al., 2015)	Patient safety management from the nurse's perspective.	Cross-Sectional. 7 samples of nurse managers and 49 samples of coordinator nurses	Based on the results of a study of 15 hospitals, 100% had an adverse event reporting system, 71.4% had a risk management committee, and 80% had discussions about the implementation of patient safety. Nurses must be committed and cultivate a culture of patient safety and be motivated so that they are not afraid to make patient safety reports.
(Hessels et al., 2019)	Impact of patient safety culture on missed nursing care and adverse patient events.	Cross-Sectional. nurses from 29 units in 5 hospitals.	311 The better the patient safety culture, the better the quality of nursing care.

Table 2: Efforts to Prevent Fall Risk by Nurses in Hospitals

Reference	Title	Method	Results
(Iriyanto Pagala, Zahroh Shaluhiyah, 2017)	The behavior of the nurse's compliance in carrying out the soup on patient safety incidents at the X Kendari Hospital.	Explanatory Research with a Cross-Sectional design. 134 inpatient room nurses	Nurses have not implemented fall prevention according to applicable standard operating procedures (SOP), such as not reassessing so nurses are not optimal in carrying out fall prevention.
(Cruz et al., 2015)	Use of the Morse Fall Scale Guide: quality in nursing supervision and practice	qualitative, 10 samples of experts from 4 hospitals	Nurses must have a critical and reflective attitude. This is an attitude that is crucial to making the right decisions and solving problems effectively. This Morse Scale Guide makes an important contribution to nurses being accurate in assessing falls.
(Lee et al., 2016)	Development and evaluation of an automated fall risk assessment system	Experimental. Falling and non-falling samples were 868 and 3472 for the development study, 752 and 3008 for the validation study, and 58 and 232 for validation after clinical application.	A fall risk assessment system using (Auto-FallRAS) based on electronic medical records (EMR). The results of the development and evaluation of this system can automatically analyze information and the patient's risk of falling so that the assessment is more efficient.
(Rahayu Winarti, Dwi Firokhatul Mu'minin, 2020)	The relationship between nurse care and the prevention of falling risk patients in the Cempaka and Kenanga rooms of RSUD dr. H. Soewondo Kendal.	Cross-Sectional. 44 nurses in the Cempaka and Kenanga rooms.	The better the nurse's care, the lower the risk of falling. Caring can be done by nurses such as physical environment management and increasing safety by assessing balance and decreased consciousness and providing education to patients and families about the risks that can cause falls.
(Clara, 2017)	Implementation of fall risk prevention carried out by hospital nurses. North Sumatra University	Descriptive. 68 samples of hospitalized patients	North Sumatra University Hospital implements fall risk prevention by taking actions such as accompanying patients when going to the toilet, getting out of bed, putting stickers on the bed, and providing education about the risk of falling.
(Carlesi et al., 2017)	Patient Safety Incidents and Nurse Workload	Cross-Sectional. 85 samples of nurses and 157 samples of nurse assistants	The high workload and the large ratio of the number of patients that must be served resulted in nurses being less able to meet the needs and monitoring of patients.

Table 3: Implementation of Patient Safety by Nurses in Prevention of Fall Risk in Hospital

Reference	Title	Method	Results
(Nursery & Champaca, 2018)	Implementation of 6 patient safety goals by nurses in preventing adverse events in hospitals	Explanatory Design and FGD. 107 samples of nurses and 7 FGD participants	Nurses in the room have implemented 6 patient safety goals with good categories for preventing Adverse Events. These include accurate patient identification, effective communication, necessary drug safety enhancements, exact location certainty; procedure; and surgical patients, reduced risk of infection, and reduced risk of falls.
(Panjaitan, 2017)	Prevention of the Risk of Falling Patients in the Internal Medicine Room, Dr. Pirngadi Medan City	Descriptive. 30 samples of nurses and 152 samples of patients.	Nurses in the room are already responsible for providing education to patients and families about the risk of falling. The nurse conducts a fall risk assessment, if she finds a patient with moderate and high risk, the patient will be put on a fall risk identity bracelet, and treatment is carried out according to the management of the patient at risk of falling.
(Zecevic et al., 2017)	Improving safety culture in hospitals: Facilitators and barriers to implementation of the Systemic Falls Investigation Method (SFIM)	Cross-Sectional. 88 samples of nurses	The implementation of a patient safety culture in two hospital units is not good, causing the implementation of fall risk prevention is not good. Hospital accreditation facilitators continue to motivate health workers to implement a patient safety culture, improve infrastructure, and be able to pass accreditation. Barrier factors such as high workload, lack of time and resources, and poor communication must be addressed and minimized.
(Nurhayati et al., 2020)	Nurse Compliance Carrying Out Fall Risk Assessment with Implementation of Interventions for Fall Risk Patients	Cross-Sectional. 44 samples of nurses.	Nurses at Bhakti Wira Tamtama Hospital Semarang are obedient in carrying out a fall risk assessment according to the applicable SOP, and patient intervention falls.

Table 3. shows that nurses have implemented 6 patient safety goals and are responsible for providing education to patients and families about the risk of falling. The nurse conducts an assessment of the patient at risk of falling, if he finds a patient with moderate and high risk, an identity bracelet will be attached and treatment will be carried out according to the management of the patient at risk of falling. Improper implementation of patient safety culture will lead to poor implementation of fall risk prevention. All health workers must continue to be motivated to implement a patient safety culture and comply with carrying out fall risk assessments according to SOPs and patient fall interventions.

DISCUSSION

Implementation of Patient Safety by Nurses in Hospitals

The nursing profession is a professional who plays an important role in hospital functions, because of their involvement in almost all service activities in hospitals. This places the nurse's role as an important component in supporting patient safety programs (Saputri, 2019). Based on research results (Suryanto, 2018), (Françolin et al., 2015), (Hessels et al., 2019) that a patient safety culture is implemented to assist in increasing hospital accountability, implementing prevention programs, and reducing patient safety incidents. This is in line with the goal of patient

safety which refers to the impact of the hospital such as a decrease in adverse events (Unexpected Events), prevention programs can be implemented, and hospital accountability will increase (Asmirajanti et al., 2021).

Research results (Akwilina Ritarni Anseli Soru, 2018) entitled patient safety goals that as many as 68.8% of nurses carry out 5 moments of hand washing and as many as 100% of nurses carry out an initial assessment of the risk of falling and reassessment if there is a change. 84% of nurses have identified with two types of patient identity, namely the patient's name according to the patient's identification and date of birth, and 91% of nurses carry out effective communication with the SBAR technique, and as many as 100% of nurses carry out drug safety by making a list of drugs that need to be taken. watch out (Insani & Sundari, 2018).

Based on research results (Widiasari et al., 2019) nurses have implemented therapeutic communication and created a sense of security in the hospital environment to reduce the risk of falling. This is in line with patient safety goals that need to be carried out by nurses such as identifying patients, conducting effective communication, being aware of drug administration, ensuring the right location, right procedure, and right operation, and reducing the risk of infection and the risk of falling. Patient safety that is done well will reduce and alleviate unsafe actions for patients (Syafriyani, 2019)

The results of research conducted by (Dubois et al., 2013) that the management of nurses using a professional nursing care model organization carries out patient safety better than the management of nurses using a functional model organization. In the management of the professional model organization, they are more consistent in providing explanations to patients and families about the plans and outcomes of services, treatments, and procedures as well as events that may occur. They also involve patients in the service process. The hospital has coordinated comprehensive services starting from the patient's admission to discharge. Monitor and evaluate performance through data collection, and provide a proactive program to identify safety risks and minimize incidents. Carry out training and orientation for new staff on the topic of patient safety by their duties.

The implementation of patient safety requires patient safety standards as a reference for carrying out health services. Safety standards consist of seven, namely patient rights where patients and families obtain information regarding the action plan to be provided, education for patients and families about obligations and responsibilities in service care, continuity of service with coordination between health workers and between units, and

performance improvement to improve processes. that exist to improve performance and patient safety, leadership roles in ensuring the implementation of patient safety programs, education for staff with training and orientation for each position as well as effective communication in the information management process related to patient safety (Kim et al., 2021).

Efforts to Prevent Patients from Falling by Nurses in Hospitals

In the research conducted (Hiyama, 2017) that the incidence of patient falls reached 19.3% with 10% of all patients experiencing serious injury or death. In research conducted by (Nur et al., 2016), it was found that the data reported throughout 2012, as many as 34 incidents or the equivalent of 14% of incidents fell in hospitals in Indonesia. This is evidence that the incidence of patient injuries due to falls is still high, so nurse compliance is needed in the implementation of nursing care. Therefore, the role of nurses is very important to support the prevention of the risk of falling.

Based on research results (Iriyanto Pagala, Zahroh Shaluhiah, 2017), (Cruz et al., 2015), (Lee et al., 2016) that the SOP for falling patients is carried out by nurses when providing nursing care such as conducting initial assessments since the patient enters the hospital. consists of identifying patients at risk of falling with MFS then determining the patient's level of risk of falling (low, medium, high), then reassessment is carried out every time there is a change in improvement, as well as installing a patient striker who is at risk of falling on the patient's wrist to find out which patients are at risk of falling. This is in line with patient safety measures in reducing the risk of falling which include conducting an assessment with an MFS assessment, installing a risk bracelet to identify patients who are at risk of falling, installing a red triangle label installed in front of the bed so that all nurses and families know the patient is at risk of falling (Ginting, 2019).

Research conducted by (Rahayu Winarti, and Dwi Firokhatul Mu'minin, 2020) that the implementation of caring nurses can prevent the risk of falling. Where there is a significant relationship between nurse care with the risk of falling. The better the nurse's care, the lower the risk of falling. Things that can be done in reducing the risk of falling as part of caring for nurses such as physical environment management and increasing safety by assessing balance and decreased awareness and providing explanations to patients and families about the risks that can cause falls. In this case, not only attitudes but actions of nurses in assisting individuals/clients in meeting patient needs or what is called intervention are also needed to prevent patient falls.

Research results (Clara, 2017) said that appropriate intervention is urgently needed to

prevent patients from falling. Nurses carry out fall risk prevention with intervention measures such as accompanying patients when going to the toilet, accompanying patients when getting out of bed, using yellow tape for patients at risk of falling, installing a fall risk striker on the patient's bed and explaining education to patients to understand fall risk communication. The nurse provides an assessment 4 hours after the patient enters the hospital with MFS, then reassesses if there is a change in improvement, categorizing the risk of falling (low, medium, high) and then implementing it, providing fall risk interventions according to the fall risk category (Saain, 2016).

Based on research results (Carlesi et al., 2017) explain patient safety incidents and workloads. Where in this study a high workload can affect patient safety incidents, especially falling patients. The high workload such as the large ratio of the number of patients that must be served by each nurse can result in limited nurses in meeting patient needs and monitoring. This causes a lack of quality service provided by nurses in meeting patient needs. This is in line with research conducted by (Marpaung, 2019) which discusses improving the quality of service and aims to improve patient health by reducing the risk of falling through correct patient identification. Recognize the impact of the risk of falling on the patient himself. Carry out preventive measures to reduce the number of patients at risk of falling. Thus the health services provided have a positive impact on patients and the community as well as on hospitals.

Application of Patient Safety by Nurses in Prevention of Fall Risk in Hospitals

Improving the quality of hospital services is not easy because it is related to many things. One of them is patient safety which is the main target. Patient safety in hospitals is a system where hospitals make patient care safer. The application of patient safety by nurses refers to nurses' compliance with patient safety goals which include: identifying patients, conducting effective communication, being aware of drug administration, ensuring the right location, right procedure, and right operation, and reducing the risk of infection and the risk of falling. Patient safety that is done well will reduce and alleviate actions that are not safe for patients. In addition, nurses also refer to patient safety standards in which there are 7 standards which include patient rights, educating patients and families, continuity of care, performance improvement, leadership roles, and effective communication. Nurses as providers of nursing care to patients are responsible for providing safe nursing services for patients. One of them is implementing patient safety by encouraging specific improvements in providing health services to patients.

Improving service quality aims to improve patient health by implementing 6 safety goals including the accuracy of patient identification, effective

communication, improvement of drug safety that is necessary, the certainty of the exact location; procedure; and surgical patients, reduced risk of infection, and reduced risk of falls (Nursery & Champaca, 2018). Efforts that can be done by nurses in preventing the risk of falling are carrying out nursing care according to applicable SOPs such as conducting an initial assessment by identifying patients at risk of falling using MFS, determining the level of patient risk of falling (low, medium, high), then conducting a reassessment carried out every time there is a repair change, as well as installing a patient striker at risk of falling on the patient's wrist to identify patients at risk of falling and installing a red triangle label installed in front of the bed so that all nurses and families know the patient is at risk of falling.

The application of patient safety and fall prevention efforts according to SOPs with good nurse compliance will have a broad impact, especially on the community. They get safe health services, and quality and meet expectations. Optimal and quality services can improve the image of a hospital and become an added value for the achievement of national and international standard services and increase public trust in hospitals. For nursing services, improving the quality of services can improve the quality of nursing care (Nurhayati et al., 2020).

CONCLUSIONS

Patient safety must be a culture that is continuously carried out by nurses to improve the quality of service. The implementation of patient safety will reduce the number of patient safety incidents, especially falling patients. Nurses can implement patient safety by always referring to 7 patient safety standards which include: patient rights, educating patients and families, continuity of service, performance improvement, leadership roles, and effective communication. Nurses must always provide nursing care following applicable standard operating procedures.

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