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Analysis of Strategy Design to Anticipate Errors in Patient Handling Based on Identification of Human Factors and Systems in The Health Services Unit

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Abstrak

Penelitian ini bertujuan untuk mengevaluasi manajemen pada unit kesehatan yang mengakibatkan ketidakpuasan pasien dan berdampak terhadap keselamatan pasien. Metode pengumpulan data menggunakan survei dan observasi. Ukuran sampel yang digunakan adalah 100 orang. Hasil dari studi menunjukkan bahwa tenaga kesehatan dengan latar pendidikan memadai dapat mengurangi kelalaian kerja, tenaga kesehatan harus meningkatkan motivasi untuk terus belajar. Kondisi kerja yang baik, seperti persentase pekerjaan sampingan yang rendah dan rasio perawat-pasien yang memadai dapat meminimumkan kesalahan pengobatan dan stres kerja. Penerapan sistem yang mendukung pelaporan sangat penting untuk mengidentifikasi dan mencegah kelalaian kerja. Selain itu, rendahnya motivasi dapat mengakibatkan berkurangnya kualitas pelayanan.

Kata Kunci: *Unit Kesehatan, Kelalaian Kerja, Pasien, Kualitas Pelayanan*

Abstract

This study aims to evaluate management in health units which results in patient dissatisfaction and impacts on patient safety. Data collection methods use surveys and observations. The sample size used was 100 people. The results of the study show that health workers with adequate educational background can reduce work negligence, health workers must increase their motivation to continue learning. Good working conditions, such as a low percentage of second jobs and an adequate nurse-to-patient ratio can minimize medication errors and work stress. Implementing a system that supports reporting is very important to identify and prevent work negligence. In addition, low motivation can result in reduced service quality.

Keyword: *Health Unit, Work Negligence, Patients, Service Quality*

INTRODUCTION

Patient safety issues require a holistic and comprehensive approach that covers various aspects, including education and training of health workers, the development of safe policies and procedures, the effective use of technology and information systems, and the active participation of patients and their families in the care process (Tannady et al., 2019). Furthermore, we cannot undervalue the significance of safety culture in healthcare organizations, as it fosters transparency, promotes learning from mistakes, and fosters continuous improvement (Andry et al., 2022). Efforts to improve patient safety also involve collecting and analyzing adverse event data, which enables the identification of trends and the development of effective interventions (Dharmawan et al., 2021). WHO, through the Global Alliance for Patient Safety, provides guidance and resources for member countries to implement patient safety best practices. In order to strengthen these efforts, international collaboration is key (Andry et al., 2021). Countries can learn from each other's experiences and successes, share innovations, and work together to overcome existing challenges. We hope to significantly improve patient safety, reduce adverse events, and ensure all patients receive safe, high-quality care with shared commitment (Ervin et al., 2021).

Patient safety is a topic of interest to healthcare professionals, including nursing professionals. However, there is still little information regarding the role of nurses in error prevention and risk management in the health sector (Dharmawan et al., 2024). Therefore, it is necessary to study nursing participation in patient safety. Although efforts have begun to create patient safety strategies aimed at preventing errors within institutional quality frameworks, these initiatives generally originate from medical organizations, where nursing participation is still very limited (Darmawan et al., 2020). In fact, nurses have an important role in various aspects of patient care and can make a significant contribution to improving patient safety. The role of nurses in patient safety includes several important aspects,

including patient monitoring, where nurses are on the front line in monitoring the patient's condition and can detect early signs of complications or medical errors, enabling rapid intervention that can save lives. Furthermore, nurses play a crucial role in communication and coordination, acting as intermediaries between patients, families, and other healthcare team members. They ensure the timely and accurate sharing of all pertinent patient information, thereby mitigating the risk of errors (Madyatmadja et al., 2021).

Nurses are also responsible for educating patients and families about medical conditions, treatment plans, and safety measures (Susanto et al., 2023). Good knowledge on the part of patients and families can help in reducing medical errors and increasing safety. Another important aspect is the implementation of safety protocols, with nurses playing a role in implementing and adhering to infection control procedures, safe medication administration, and pressure ulcer prevention (Ernayani et al., 2021). Adherence to these protocols is critical to reducing adverse events. Finally, nurses are also responsible for risk management, where they are involved in the identification and management of risks in the healthcare environment, as well as safety audits, adverse event analysis, and the development of prevention strategies (Rafid et al., 2023). To increase nurses' participation in patient safety, several steps can be taken, such as providing adequate education and training for nurses regarding patient safety and risk management, encouraging nurses' leadership roles in patient safety initiatives, increasing collaboration between nurses and other health professionals to create an integrated approach to patient safety, and developing and strengthening policies and procedures that support the role of nurses in patient safety (Andry et al., 2023). By recognizing and enhancing the role of nurses in patient safety, healthcare institutions can achieve higher levels of safety and ensure that patients receive safe, high-quality care.

RESEARCH METHOD

The data collection methods used in this study involved an anonymous structured survey and a risk factor observation guide. Structured surveys use closed and open questions. Previously, we conducted a pilot test with nurses to validate the instrument, revealing clear survey questions and a completion time range of 20 to 30 minutes. The survey questions and format remained unchanged after the pilot testing. This research used a sample size of 100 people. Of all respondents, 55% were women and 45% were men, with the average age of survey participants being 42 years. Hospital management communicates information from these surveys and observations informally.

RESULT AND DISCUSSION

Professional staff accounted for 65% of the institutions studied. This is considered important because several authors have determined that inadequate academic training, a lack of appropriate guidance and training, and a lack of motivation to continue learning are causes of adverse events. The percentage of staff who have an adequate academic level is considered a protective factor for the institution. However, deepening the motivation to continue training is necessary because low scientific insight, inadequate preparation for correct analysis of knowledge sources, and insufficient continuing education can result in the acquisition of incorrect or out-of-date information, thereby increasing the risk of side effects. On the other hand, active participation, continuous training, and motivation in nursing can protect healthcare users from unsafe practices.

The low percentage of side workers is considered a protective factor against adverse events because double shifts or multiple jobs are considered one of the factors that influence the development of medication errors. In addition, excessive workload, fatigue, stress, and the number of staff working hours are other causes of adverse events. This dual employment situation is related to the dissatisfaction expressed by nurses regarding the financial remuneration received at the institution. This situation reflects the country's shortage of professionals, demanding working conditions, and low wages. Although most respondents had experience in the profession, it was found that a lack of motivation for training could pose a real risk factor. Routine tasks and activities may lead to inappropriate care practices, increasing the risk of adverse events. While experience is crucial, skills alone cannot ensure the prevention of adverse events; continuous training must accompany this. It is important to update health knowledge systematically, along with continuous advances in science and technology. However, paradoxically, respondents stated that their motivation to continue working at the institution was because it was a teaching hospital.

The number of hours worked per week was considered by respondents to be an institutional protective factor, as fatigue, tiredness, stress, and lack of rest were widely associated with the occurrence of side effects. However, the nurse-to-patient ratio in the institution is low, indicating a real-risk situation. The relationship between nurses and patients is critical to patient safety, and morbidity tends to increase in situations where the number of patients exceeds the ratio for general inpatients. Conversely, high levels of work absenteeism, closely linked to excessive workload, fatigue, and stress, can impede the improvement of performance. Adverse events can affect the performance of nurses in health institutions, but their profession's implementation does not always cause errors. Although some professionals from various disciplines may hold the view that patient safety is primarily

nursing's responsibility, evidence suggests that nursing vigilance can protect patients from unsafe practices. Nurses play an important role in preventing adverse events, but they are not the only ones. Therefore, handling patient safety requires inter- and multidisciplinary participation, as well as an overall institutional quality policy that includes patient safety management. All members of the health team, including nursing staff, under the leadership of the institution, must be familiar with the guidelines and objectives of patient safety management. Patient safety is the undeniable responsibility and duty of nursing. To ensure safety and optimal service quality, nurses must have knowledge, experience, and quality in their daily care activities with patients.

Medication errors were one of the main causes of side effects, according to most of the authors consulted. A variety of factors, including ignorance, lack of academic training, routine, overconfidence, stressful conditions, large patient numbers, excessive workload, fatigue, and distraction, can lead to medication errors. Furthermore, the absence of medication administration protocols, coupled with a lack of sources of information regarding presentation, dosage, and route of administration, can increase the risk of side effects due to medication errors. Therefore, to identify the factors that influence medication errors and take appropriate preventive steps, a more in-depth and specific study is necessary.

Implementation of an adverse event notification system is essential to identifying, tracking, and analyzing adverse events in healthcare institutions. With this system, accurate information about adverse events can be well documented, enabling relevant parties to visualize the true dimensions of existing problems and take appropriate preventive steps. When communities state that they will report errors if they occur, but there is no formal system for doing so, this can hinder efforts to improve patient safety. It is important for healthcare institutions to create an environment that supports open reporting of adverse events without fear of punishment or sanctions. In addition, professional responsibility in reporting adverse events and providing responses to social authorities for the losses caused also needs to be considered. This is an integral part of ethical and responsible nursing practice. Thus, systems that enable safe and anonymous reporting can help improve patient safety and build a strong safety culture in healthcare institutions.

Institutional stress, especially related to the number of patients assigned during a shift, is a serious problem that can contribute to stress and have potential adverse effects on nurses. A more in-depth study of this topic could provide valuable insight into how these factors influence caregiver well-being and the quality of care provided to patients. Institutional pressures and other factors can negatively affect the mental and physical well-

being of nurses. This can lead to increased absenteeism, decreased job satisfaction, and even intentions to leave the profession. Therefore, it is important for healthcare institutions to take steps to reduce this pressure, such as ensuring that the number of patients assigned matches the capacity of nurses, providing adequate emotional and psychological support, and creating a work environment that supports nurses' well-being. By understanding and addressing the factors that lead to institutional stress and strain, healthcare institutions can improve nurse well-being and the overall quality of patient care.

Cooperation in terms of notification of adverse events is an important factor in protecting institutions from negative impacts that can arise as a result of errors or incidents. Incident reporting is necessary not only to classify the incident, but also to monitor the incident and create strategies aimed at preventing similar incidents in the future. By reporting incidents, institutions can conduct proper analysis of the information, making it possible to know the true situation regarding the problem that occurred and making progress in creating a better patient safety culture. Therefore, cooperation in terms of adverse event notification is an important step in improving patient safety in healthcare institutions. Developing strategies for accurate user identification is crucial, particularly in healthcare institutions that rely on bed numbers or other error-prone identification methods for patient identification. Mistakes in identifying users can have serious consequences, including the possibility of adverse events. A lack of adequate protocols and information can be a risk factor for the emergence of side effects. Therefore, health services should regularly implement and update practice-relevant action protocols. This approach facilitates and expedites work, thereby enhancing patient safety.

Lack of critical situation care elements, limited training in the use of monitors and other electronic equipment commonly used in the health sector and weak knowledge about critical situations such as skin care and pressure ulcer prevention are risk factors for the emergence of side effects. Furthermore, the absence of incidental education programs and the lack of permanent nursing training pose real risks, as health workers require training to interpret the risks of their actions. A lack of diagnostic and prognostic criteria may also increase the likelihood of failure or inaccurate decisions. Therefore, it is important to have clear criteria that are well understood by health workers to prevent errors and side effects. Improvements in training, knowledge, and scientific understanding can help reduce these risks and improve patient safety.

Lack of motivation, significance, and professional self-esteem can lead to the assignment of nursing duties to other professions, which can endanger the quality of service and user safety. Academic training and experience can help ensure the quality of care, but

they are not enough to avoid side effects. We also need continuous training programs and access to correct and up-to-date information to support improving service quality and user safety. When developing your research, it is important to consider the various factors that influence the quality of health care, including motivation, professional significance, and ongoing training. We can identify effective strategies to enhance care quality and patient safety in the nursing profession by deepening our understanding of these factors.

Understanding hand hygiene is very important in preventing infection, especially in a hospital environment. Promoting good handwashing techniques with honest and easily accessible information can be an effective protective factor.

CONCLUSION

This research highlights the importance of continuing education and motivation in maintaining service quality and patient safety in healthcare institutions. Adequately educated professional staff can reduce adverse events, but they must deepen their motivation to continue learning. Good working conditions, such as a low percentage of moonlighting and adequate nurse-to-patient ratios, can protect against medication errors and excessive stress. Implementation of an adverse event reporting system that supports open reporting without punishment is critical to identifying and preventing adverse events. Lack of technical training and knowledge of critical situations increases the risk of side effects, so incidental education programs and permanent training are necessary. In addition, low professional motivation and self-esteem can result in reduced service quality. Patient safety is a shared responsibility of the entire healthcare team, and establishing a strong safety culture, including the promotion of good hand hygiene, is critical to preventing infections and improving patient safety.

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