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FACTORS AFFECTING PATIENT SAFETY INCIDENT REPORTING

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Abstract. Patient safety incident reporting is one of the steps taken needed to improve patient safety. Reporting can provide a broad picture of the incident and how it happened. This can be used as basic data for policy making and making patient safety programs in hospitals. The subjects in this study were health workers. This research method uses a *systematic review*, from various sources of research that has been done previously. The databases used in this study are Science Direct, Scopus and SpringerLink, journals published from January 2011 to December 2021 which were then extracted using PRISMA 2009 flowcharts. So that the final results were 11 journals that were reviewed. This study resulted in reporting patient safety incidents influenced by individual factors, group/unit factors and organizational factors. The conclusion of this study is that incident reporting can be improved by evaluating and improving individual factors, group/unit factors and organizational factors

Keywords: reporting; incidents; patient safety.

INTRODUCTION

Health services are the result of interactions between customers and providers that cannot be seen with the naked eye, but the benefits can be felt (Garcia-Fernandez, Bernal-Garcia, Fernandez-Gavira, & Velez-Colon, 2014). The results of the service in question can be in the form of satisfaction and benefits obtained from service providers and recipients (Kotler & Armstrong, 2010). One of the requirements for health services is quality (Putri & Isnani, 2015). Components of service quality or the quality of health services themselves are translated into components of structure, process and outcome (Schulze et al., 2017). Patient safety plays an important role in improving quality and reducing risks to health workers, non-health workers, risks from facilities and infrastructure, financial risks, and others (Feng, Acord, Cheng, Zeng, & Song, 2011). Quality in safety is used to identify the level of risk and undesirable events so that they can be avoided and minimized through continuous assessment. Quality is a continuation of health services to patients, both individually and in groups. Safety (patient safety) is one of the dimensions of service quality according to IOM (Istiqomah, Listyorini, & Yuliani, 2021).

The hospital is a health service place that has multi-professional characteristics and multi-risk factors, so a system is needed that can protect patient safety in hospitals. Improving the quality of hospitals by increasing patient safety can provide benefits for both hospitals and patients. The step towards patient safety is the implementation of patient safety incident reporting. Reporting patient safety incidents can reduce the risks that arise as a result of an incident, can improve patient safety and be used as a basis for designing programs that are centered on patient safety issues (Mjadu & Jarvis, 2018). Medical incident reporting is also considered an important element in improving patient safety and quality of care, so it should be made an integral part of the organizational culture (AbuAlRub, Al-Akour, & Alatari, 2015).

Reporting patient safety incidents can reduce risks that may occur during service delivery, so that the number of incoming complaints can be minimized, costs due to the impact of incidents will be smaller and most importantly patient satisfaction will increase. Increasing patient satisfaction with good safety quality will also increase public trust in hospitals, so that people can get optimal health services with minimal risk and hospitals gain trust with a good image.

METHODS

The systematic review in this study uses PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyzes) with the PICOS approach in research formulation, inclusion and exclusion criteria. The databases used are journals from Science Direct, Scopus and Springerlink. This is done to obtain relevant and credible journals. The inclusion criteria for this study included scientific journals with the theme of patient safety incident reporting published on January 1, 2011 – December 2021, in English, with all study types and the population being hospital

staff. The keywords in article search were: "Patient safety incident" AND "incident reporting" OR "medical error reporting" AND "factors related to incident" AND "hospital". The selected article is an article that aims to determine the factors that are related to (influence or hinder) the reporting of patient safety incidents. The research is not limited to a particular area, only limited to hospital employees and is not a systematic review. The search resulted in 512 journals in Science Direct, 22 journals in Scopus and 426 journals in Springer Link. In accordance with the PRISMA diagram, the next search is the filtering of journals which are duplicates of 73 journals. The search was continued by filtering titles and abstracts that matched the topic of discussion, and 861 titles were not appropriate and 15 journals were systematic reviews.

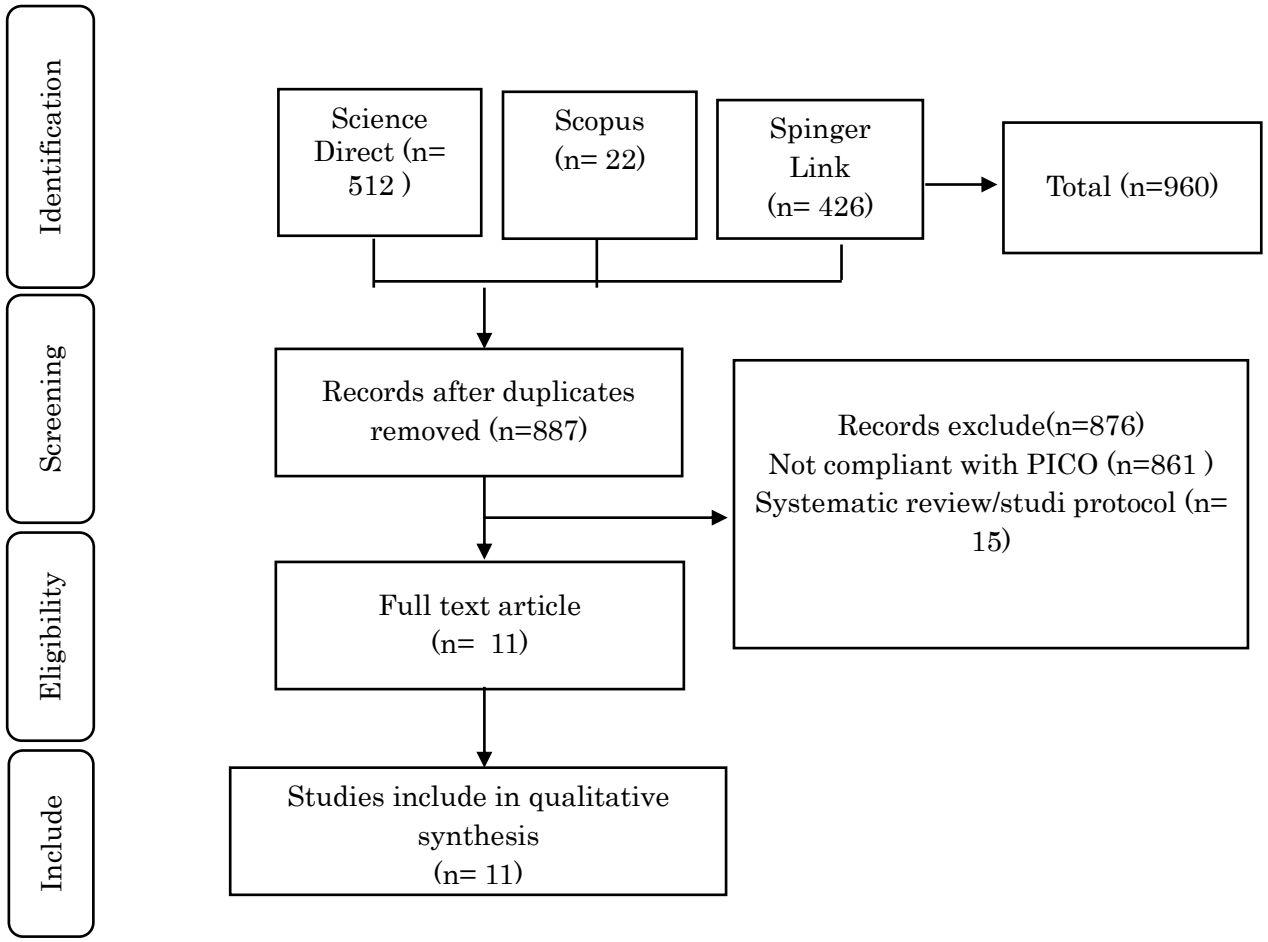

Figure 1. PRISMA FLOW DIAGRAM

Table 1. Summary of Research Results

Author Name (Year)	Title	of Research Method	Sample/Research Population Research	Location	Results
(Haller, Courvoisier, Anderson, & Myles, 2011)	Clinical factors associated with the non-utilization of an anesthesia incident reporting system	Retrospective cohort of	46,207 surgical patients	The Alfred Hospital (Melbourne, Australia)	Factors influencing reporting are clinical environment, team composition, severity of incident and perceived risk of litigation
(Alzahrani, Jones, & Abdel-Latif, 2018)	Attitudes of doctors and nurses toward patient safety within emergency departments of two Saudi Arabian hospitals	Cross-Sectional	503 IGD doctors and nurses	Hospitals in Saudi Arabia	Teamwork, job satisfaction and performance have a negative relationship with patient safety incident reporting rates
(Vermeulen, Kleefstra, Zijp, & Kool, 2017)	Understanding the impact of supervision on reducing medication risks: an interview study in long-term elderly care	Mix method: Qualitative with semi-structured interviews Quantitative with risk	Health care professionals from ten	Dutch	Implementation of supervision increases willingness to report patient safety incidents
(Gong, Song, Wu,	Identifying barriers	with semi-		Texas Medical Center	The barriers to incident reporting

& Hua, 2015)	and benefits of patient safety event reporting toward user-centered design	structured interviews at			were lack of instruction and training, lack of knowledge, lack of time and lack of feedback .
(Polisena, Gagliardi, & Clifford, 2015)	How can we improve the recognition, reporting and resolution of medical device-related incidents in hospitals? A qualitative study of physicians and registered nurses	Qualitative with semi-structured interviews	Doctors and nurses	Ottawa, Toronto, Canada	Incident reporting is influenced by error rate, physician's personal attitude, and feedback received on reported errors
(Naome, James, Christine, & Mugisha, 2020)	Practice, perceived barriers and motivating factors to medical-incident reporting: a cross-section survey of health care providers at Mbarara regional referral hospital,	Cross sectional	158 health workers	Mbarara Regional Referral Hospital (MRRH), Western	Uganda encouraging patient safety incident reporting is the establishment of a communication system, corrective action for incidents, good knowledge Factors that hinder patient safety incident reporting are lack of knowledge about incidents and reporting, no incident reporting team, fear of being punished

	southwestern Uganda				
(Tuffrey-Wijne et al., 2014)	The challenges in monitoring and preventing starch ent safety incidents for people with intellectual disabilities in NHS acute hospitals: evidence from a mixed-methods study	Mix method consisting of interviews, observation and monitoring and distributing questionnaires	to clinical hospital staff (n = 990); questionnaire to guardians (n = 88); interviews with: hospital staff including senior managers, nurses and doctors (n = 68) and caregivers (n = 37); observation of inpatients with intellectual disabilities (n = 8); monitoring incident reports (n = 272) and complaints involving persons with intellectual disabilities	NHS acute hospitals	Events leading to avoidable hazards are not recognized as safety incidents and the absence of an effective system for monitoring incidents prevents reporting
(Hewitt, Chreim, & Forster, 2016)	Incident reporting systems: a comparative study	Qualitative with semi-structured	of 85 health workers at	Hospital X	Things that affect the patient safety incident reporting process are litigation, training/knowledge on

	of two hospital divisions	interviews			patient safety incident reporting and teamwork
(El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011)	Predictors and outcomes of patient safety culture in hospitals	Cross sectional	67 Hospitals and 6,807 hospital staff	Private Hospitals in Lebanon	Factors that enhance reporting of patient safety incidents are feedback and communication regarding errors, supervisor/manager expectations and actions to promote patient safety, organizational learning and continuous improvement, and teamwork within hospital units
(Mjadu & Jarvis, 2018)	Patients' safety in adult ICUs: Registered nurses' attitudes to critical incident reporting	descriptive quantitative non-experimental	127 ICU nurses	at a tertiary provincial hospital in KwaZulu-Natal, South Africa	Managerial support can improve reporting of critical incidents Unpleasant collegial atmosphere is associated with reporting of patient safety incidents
(Nada J. Alsaleh, 2020)	Adverse drug reaction reporting among physicians working in private and government hospitals in Kuwait	Cross-sectional	1045 doctors	Hospitals in Kuwait	Factors that hindered reporting IKP were lack of knowledge about how to report, absence of a reporting system, perception that reporting was unimportant, lack of awareness and commitment to reporting, lack of time

Table 2. Grouping of factors that affect reporting of patient safety incidents in hospitals

Individual	Factors Group/Team	factors Organizational factors
Lack of individual knowledge about the classification of patient safety incidents makes it difficult for individuals to understand between the definition of incident categories and practice in the field, in addition, knowledge of how to report also affects incident reporting. patient safety Individual perceptions of events that do not result in injury or potentially hazardous events but can be prevented leading to incidents not being reported Litigation raises concerns and fears of license revocation and penalties for individuals so that not discourage individuals from reporting Very high threat of litigation in the service sector with elements of special effort on the contrary becomes a great motivation for reporting Individual personal attitudes Lack of time to report, awareness and commitment to reporting makes individuals not reporting	Unpleasant team atmosphere associated with patient safety incident reporting Team work within hospital units increases the likelihood of reporting Supervision increases willingness to report patient safety incidents Clinical environment and team composition influence reporting Training on interpersonal teams and communication initiatives encourages incident reporting	Reporting systems are considered essential for running the incident reporting process Absence of an effective system for monitoring incidents leads to incidents not being reported No incident reporting team hinders reporting Establishment of communication system encourages pel Reporting Culture within the organization which includes feedback and communication regarding errors, supervisor/manager expectations and actions to promote patient safety, organizational learning and continuous improvement improving patient safety incident reporting, taking corrective actions regarding incidents encouraging reporting, Training to increase knowledge aimed at introducing individuals regarding the reasons why reporting is important . Unclear instructions regarding reporting

RESULTS AND DISCUSSION

The search results of 11 journals that met the research criteria. The criteria used are in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyzes) flowchart. Journal publications used are publications in 2020 totaling 1 article, 2018 totaling 2 articles, 2017 totaling 2 articles, 2016 amounting to 1 article, 2015 totaling 2 articles, 2014 totaling 1 article and 2011 totaling 2 articles. There are 1 article published on Scopus, 2 articles published in Science Direct, 8 articles published on SpringerLink. The 11 selected articles are research conducted in Australia, Saudi Arabia, Netherlands, Texas, Canada, Ottawa, Toronto, Uganda, UK, South Africa, Lebanon and Kuwait. The search results show that there are several factors that influence the reporting of patient safety incidents, both factors that can increase and factors that can hinder reporting of patient safety incidents. The summary of the research results is presented in

Table 1. Patient safety incident reports are carried out by the hospital staff who first discovered the incident or the staff involved in the incident. This is the basis that reporting must be carried out by hospital staff. Reporting patient safety incidents is staff behavior that affects organizational performance, especially regarding hospital patient safety. It is known that staff behavior is the behavior of individuals in the organization (hospital). Organizational behavior is the study of what people do in an organization and how their behavior affects organizational performance (McShane & Glinow, 2017). So that organizational behavior is very centered on situations related to work, it is emphasized that behavior in relation to work, work, absenteeism, employee turnover, productivity of human performance and management. Organizational behavior itself is examined in three levels of analysis, namely individuals, groups and organizations as a system (Purba et al., 2020). Individual behavior in the organization can not be separated from the influence obtained from the work environment and the organization within the agency. So that the behavior of reporting patient safety incidents needs to be seen from the variables related to the group/team as well as the organization. Factors that affect the reporting of safety incidents seen from the concept of behavior in the organization are divided into three analyzes, namely individual analysis, group/unit analysis and organizational analysis.

Individual

Individual factors are factors that come from within the individual to report an incident. Individual factors in the organization are seen from the diversity that includes background and demographics, personality, abilities and skills, motivation, perception and decision making (Gibson, Ivancevich, & Konopaske, 2011). The individual factor has a close relationship with reporting, because the individual is the subject who does the reporting. The first individual factor is knowledge, the knowledge that individuals need to have in reporting patient safety incidents is knowing about events categorized as incidents, then classifying

incidents (Gong et al., 2015); (Naome et al., 2020); (Hewitt et al., 2016); (F. M. Alsaleh et al., 2017). Lack of knowledge about this will make individuals unable to report patient safety incidents.

The second individual factor is individual perception, this perception is described in several ways, the most frequent of which is the fear of a lawsuit to the revocation of the practice license (Naome et al., 2020); (Hewitt et al., 2016). Other perceptions that influence reporting are the perception that events that can cause harm and can be prevented are not incidents that need to be reported and the perception that reporting is not an important thing to do (Tuffrey-Wijne et al., 2014); (F. M. Alsaleh et al., 2017). Perception is a psychological factor that can influence individual behavior, so it can be seen that an individual does something based on the perception he has of it, where a negative perception will make the individual not want to behave in a certain way. The next factor is that individuals feel they have less time and awareness and individual commitment to reporting related to reporting patient safety incidents (F. M. Alsaleh et al., 2017).

Group/Team Factors

Analysis of individual behavior in the next organization is an analysis of groups and teams that make individuals report patient safety incidents. Teamwork(or team behavior) is a dynamic process involving two or more people involved in the activities required to complete a task (World Health Organization, 2020). From the study of group behavior, it is known that being a member of a work team can affect individual behavior. The factors that influence the reporting of patient safety incidents from group analysis are teamwork and team leadership (Verbano & Turra, 2010). Teamwork in this study is known to the atmosphere in the team, teamwork within the unit, clinical environment and composition in the team affect the reporting of patient safety incidents (Mjadu & Jarvis, 2018); (Alzahrani et al., 2018); (Coutts, Piola, Hewitt, Connell, & Gardner, 2010); (Alswat et al., 2017); (Haller et al., 2011). Individuals who have teamwork will make them more obedient to the rules and SOPs in the unit, so that mistakes and actions taken independently can be monitored and there will be a process of reminding and correcting each other between individuals. This process will increase individual awareness and encouragement to report IKP as a lesson for the future. Training on interpersonal teams and communication initiatives should also be implemented to encourage incident reporting.

This study illustrates that supervision is needed to encourage patient safety incident reporting (Vermeulen et al., 2017). Supervision needs to be carried out by the leadership/supervisor team which is useful for monitoring individual activities in the unit/group. Team leadership/supervisor is the person who is appointed, selected or chosen informally to direct and coordinate the work of others in a group (Mumford, Todd, Higgs, & McIntosh, 2017). Team leadership needs to monitor and strengthen workers' safe behavior, emphasize safety over productivity, participate in safety activities, and encourage employee involvement in safety

initiatives (Wagner et al., 2019).

Organizational Factors Organizational

Factors or organizational behavior are factors that invest in the influence of individuals, groups and structures on behavior within organizations for the purpose of increasing organizational effectiveness (Elangovan, Pinder, & McLean, 2010). Organizational factors that influence individual behavior are systems and structures, regulations, culture and HR management. In the system, it is known that the existence of a structured reporting system will help individuals to report more easily. The structure and system designed is a structure and system that facilitates the reporting process, this will reduce the reason for the absence of time for reporting by individuals. Another system that is needed is a system that can actively and effectively monitor an incident in all hospital units (Tuffrey-Wijne et al., 2014). This system will encourage all incidents or incidents to be recorded and known easily by all individuals in the hospital agency, so that incidents in various groups that result in injury or have the potential to cause injury can be identified. This will encourage individuals to report incidents and get rid of the individual's perception of the reported incident being an incident that resulted in injury. A good communication system will also encourage reporting of patient safety incidents (Naome et al., 2020). Good communication will train individuals to have the courage to report. The existence of a reporting team structure will greatly assist individuals in reporting.

Organizational culture that influences reporting in this study are feedback and communication, supervisor/manager expectations and actions to promote patient safety, organizational learning and improvement, corrective action, managerial support (Mjadu & Jarvis, 2018); (El-Jardali et al., 2011). Implementation of organizational learning in fostering a culture of patient safety is one of the active activities that can foster values in the organization (Schermerhorn Jr, Osborn, Uhl-Bien, & Hunt, 2011). So that the implementation of this activity needs to be considered and used as a way to improve the existing patient safety culture. Feedback and communication about errors is an aspect that describes a patient safety culture where every individual in the organization can get information and access information on a finding or incident feedback and communication about errors comprehensiveProviding feedback is one of the principles in responding to patient safety incident reports. The expected managerial support is supported with clear regulations and instructions regarding incidents, incident reporting that is specifically stated in SOPs, as well as guidelines for each unit in the hospital. This is to encourage units to know what hazards or risks as well as incidents may occur in their units and to reduce risks arising from incidents. The existence of training designed by the organization can also improve incident reporting by individuals, where training is one way for organizations to manage their human resources and is an input stage that the organization needs to carry out. Training will make individuals more skilled, in addition to increasing knowledge about incident reporting.

CONCLUSIONS

Reporting patient safety incidents is an important process in order to improve patient safety. The results obtained in an effort to improve patient safety is an increase in the quality of service. Improving the quality of service in the end will provide benefits for the patient as a customer and the hospital as a provider. For the customer, good service quality will foster a feeling of satisfaction with the services provided and patients will avoid the many risks that may occur during the health service process. On the hospital side as a provider, the hospital will benefit directly from patient satisfaction, namely by increasing the number of patients who use the services offered. In addition, hospitals can reduce unnecessary costs due to the impact of incidents that occur. The purpose of incident reporting is not to reduce the number of incidents, because the more incidents reported, the more serious risks the hospital can minimize. In improving the incident reporting process, it is necessary to pay attention to the factors that can affect reporting behavior by staff and employees at the hospital. These factors cannot be separated from individual factors, unit environmental factors and organizational factors themselves. Because it is a system analysis of individual behavior in the organization.

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