



ANALYSIS OF NURSE ABILITY IN IDENTIFYING CLINICAL RISK: LITERATURE REVIEW

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ABSTRACT

Background: Patient safety is a top priority in hospital health care today, and the role of nurses in preventing and reducing risks, errors, and injuries is a top priority. Nurses are required to have various abilities that must be mastered in providing nursing care to patients. This study aims to identify factors that affect the ability of nurses to identify clinical risks. **Method:** A literature review that uses the PRISMA protocol in selecting articles and the Critical Appraisal Checklist in assessing article quality. Three databases are used to search articles with selected keywords from Medical Subject Headings (MeSH) combined with the Boolean operator **Results:** 10 selected articles in this study were further studied with relevant topics, and the results of the literature review stated that two main factors could influence the ability of nurses to identify clinical risks, including intrinsic factors and extrinsic factors. Intrinsic factors come from within the nurse such as knowledge and competence, psychological pressure, and experience of the nurse, while the extrinsic factors found include effective communication, teamwork, organizational support, leadership style, and work environment. **Conclusions:** the researchers concluded that the main factor that can affect the ability of nurses to identify clinical risks is effective communication.

Keywords: Ability, Nurse, Risk assessment, Medical error, Patient safety

INTRODUCTION

In this era, patient safety is a top priority in hospital health care which plays an important role in preventing and reducing risks, errors, and injuries (WHO, 2017). The risk in question is an unpredictable event or situation which, if it occurs, could have a positive or negative impact on the success of the service (Kimiafar et al., 2015; Sutejo et al., 2021). One way to overcome this challenge is to develop systematic clinical risk management. Clinical risk management includes all structures, processes, instruments, and activities that make it easy for hospitals to identify, analyze, contain,

and manage risks while providing clinical care. Effective risk management is considered very important because it is considered to improve the image of the hospital (Singh, 2012).

According to Suparna (2015), incidents related to patient safety are increasingly entering the realm of law and even going to court. The fact that in hospitals there are tens or even hundreds of types of drugs, hundreds of procedures, there are many patients, many working professions, and many systems have a huge potential for errors to occur (Hutapea, 2021). Nurses are required to have various competencies that must be mastered in



providing nursing care to patients. Nurse competencies must be very broad, including professional, ethical, legal, and culturally sensitive practices, providing care, management of nursing care, and developing personal and professional qualities (Puspitasari et al., 2018).

Several phenomena related to the ability of nurses to identify risks were found, as was done by Thompson et al., (2012) that some nurses, both new nurses and experienced nurses, tend to be unable to separate and identify clinical risks in their work environment. In a recent study conducted by Goekcimen et al (2023) they found that reporting of incidents of work errors was still high, in which drug administration errors ranked first in these incidents.

The importance of risk management plays a very important role in preventing and treating medical errors. Several studies have shown that creating a broad and in-depth understanding of medical error management can improve services to patients associated with low incident reporting (Zaboli et al., 2011) and that the application of risk management can reduce error rates in the emergency department. (Zimmer et al., 2010). So this research requires further in-depth analysis to determine the ability of nurses to identify clinical risks through risk management.

Methods

This research is systematic review research using the PRISMA protocol in selecting articles. Article quality assessment uses the Critical Appraisal Checklist to evaluate the risk of bias in selected articles. Three databases were used

to search articles (Google Scholar, Science Direct, Pubmed) by entering selected keywords from Medical Subject Headings (MeSH) combined with the Boolean operator (Table 1).

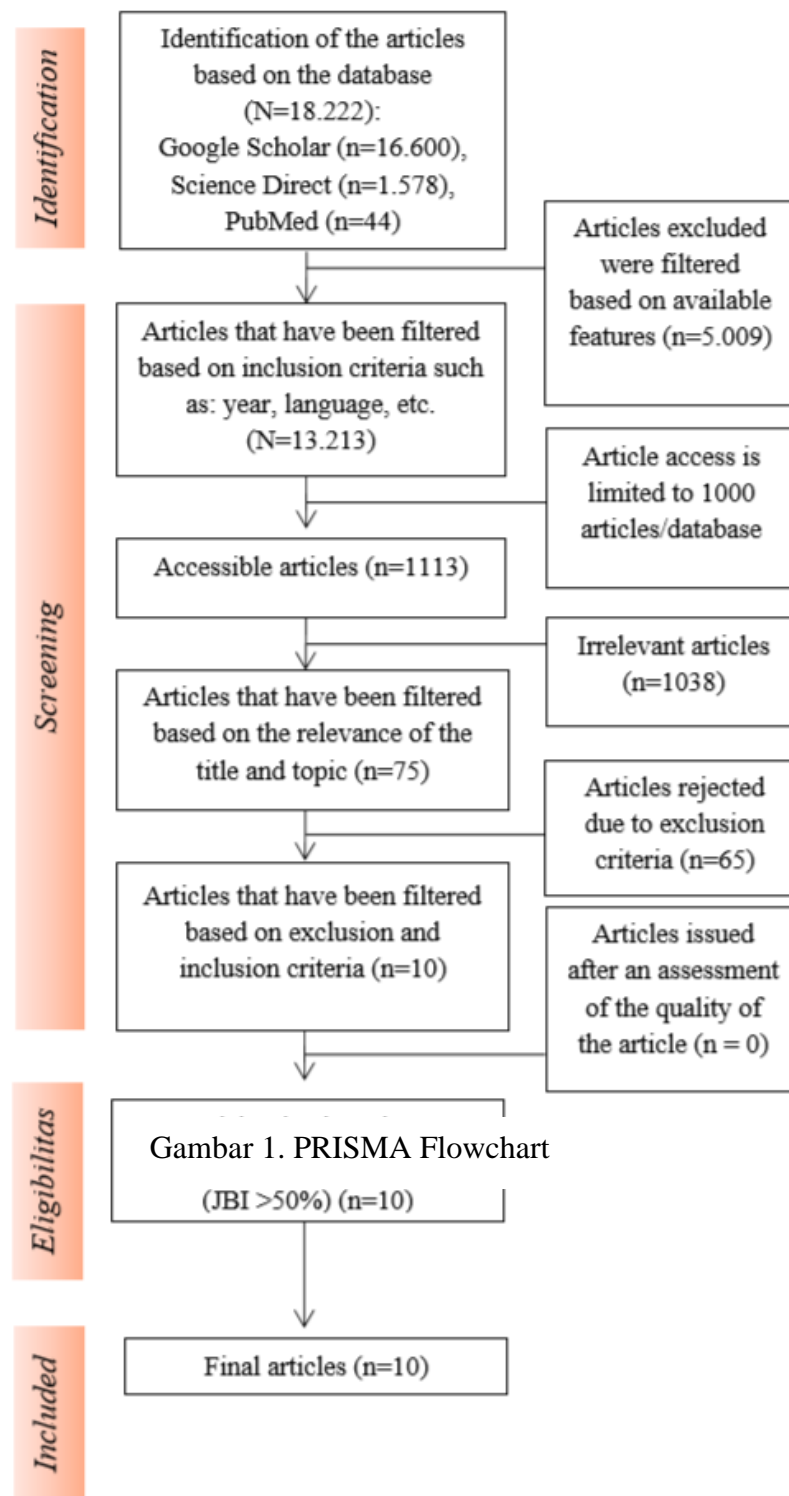
Table 1. Keyword

<i>Ability</i>	<i>Nurse</i>	<i>Risk Assessment</i>	<i>Patient Safety</i>			
<i>Ability</i>	<i>AND</i>	<i>Nurse</i>	<i>AND</i>	<i>Risk Assessment</i>	<i>AND</i>	<i>Patient safety</i>
		OR		OR		OR
	<i>AND</i>	<i>Registered Nurse</i>	<i>AND</i>	<i>Health Risk Assessment</i>	<i>AND</i>	<i>Medical error</i>

The keywords above are then combined with the Boolean operator to become (“*Ability*”) AND (“*Nurse*” OR “*Registered Nurse*”) AND (“*Risk Assessment*” OR “*Health Risk assessment*”) AND (“*Patient safety*” OR “*Medical error*”). The selection of articles was adjusted to the inclusion and exclusion criteria that had been determined through the PICOS Framework, including:

- 1). Nurses working in the hospital, 2). Implementing risk management, 3). Comparison with other intervention or control groups, 4). The results review the implementation of risk management on the nurse's ability to identify risks, 5). The article uses qualitative and quantitative research designs, cross-sectional studies, quasi-experimental studies, and randomized control and trials, 7). Research conducted in Indonesia and abroad, 8). Published in English from 2013-2023. The 4 stages used in selecting articles are adjusted to the PRISMA Flowchart (Figure 1).

Figure 1. Prisma Flowchart



RESULT

Table 2. Literature search results

No	Title/ Author/ Year	Result
1	<i>Patient safety culture among nurses/ Ammouri, Tailakh, Muliira, Geethakrishnan, Al Kindi/ 2014</i>	The findings from this study indicate that communication and teamwork in the hospital are essential to provide effective and safe care because patients are usually cared for by a multidisciplinary team of healthcare providers in a variety of clinical settings within the hospital. Lack of communication can significantly compromise patient safety and patient care outcomes.
2	<i>Handing Off Safety at the Bedside/ Patricia S. Groves, Kirstin A.Manges, Jill Scott Cawiezell/ 2016</i>	The results showed that the means of communication at the time of patient handover is one thing that needs attention, Nursing bedside shift reports (NBSR) were found to have a positive influence on the identification of clinical risks for patients. NBSR is a means of communication used by nurses in explaining the patient's condition during shift changes at the patient's bedside. This allows the nurse to identify and manage clinical risks, reduce the likelihood of harm occurring, and prevent errors from occurring.
3	<i>Depression, Anxiety, and Symptoms of Stress among Hong Kong Nurses: A Cross-sectional Study/ Teris Cheung and Paul S.F. Yip/ 2015</i>	Shift work rotation and work-related stress may be risk factors that contribute to nurses' sleep problems. Prolonged sleep deprivation can cause health problems, so this also tends to reduce nurse work performance, endanger patient care, and less than optimal treatment results. Nurses with poor physical and psychological health will affect their thought processes and ability to identify clinical risks during treatment.
4	<i>Factors influencing military nurse's reporting of patient safety events in South Korea: A structural equation modeling approach/ Sookhee Yoon Taewha Lee/ 2022</i>	The findings of this study explain that the identification of military nurse patient safety events was found to be directly or indirectly influenced by organizational factors, such as safety climate, and fair culture, and individual factors, such as knowledge of patient safety. The findings explain that organizational factors are a greater contributor to nurse identification of patient safety events than individual factors.
5	<i>The relationship between nurse manager's transformational leadership style and medication safety/ Margit Lappalainen, Marja H€ark€anen, Tarja Kvist/ 2019</i>	The results showed that there was a moderate but statistically significant correlation between transformational leadership style and medication safety. Nurse medication competence and nursing process management are significantly related to medication safety. The conclusion of the study presents that the leadership style applied affects the safety of medication in patients, medication errors are a clinical risk that must be avoided as early as possible.
6	<i>Cross-Sectional Study on Patient Safety Culture, Patient Safety Competency, and Adverse Events/ Yonghee Han1, Ji-Su Kim, and YeJi Seo/2019</i>	The higher average score in this study is communication. Patient safety culture was significantly correlated with lower rates of clinical risk events, in addition, to higher mean scores for work. Research recommends that a well-structured hospital culture can reduce clinical risks to patients. Other results also show that the competence of nurses in identifying hazards can also reduce unwanted events.



No	Title/ Author/ Year	Result
7.	<i>Patient participation in patient safety and its relationships with nurses' patient-centered care competency, teamwork, dan safety climate/ Jee-in Hwang, Sung wan kim, Ho Jun Chin/ 2019</i>	The findings suggest that nurse competence in patient-centered care can create a strong safety climate important for promoting patient participation in health care. For this reason, good nurse competence is considered to be the main capital for nurses in identifying clinical risks when treating patients.
8.	<i>Burnout mediates the association between depression and patient safety perceptions: A cross-sectional study in hospital Nurses/ Judith Johnson, Gemma Louch, Alice Dunning, Olivia Johnson, Angela Grange, Caroline Reynolds, Bscii, Louise Hall, Mscacj And Jane O'Hara/ 2016</i>	The results show that depressive symptoms and fatigue levels are related to the ability of nurses to identify clinical risks. These findings suggest that the well-being of nurses may have implications for improving patient safety and reducing clinical risk in the hospital.
9.	<i>The impact of the Work environment of the nurse on patient safety outcomes: A multi-level modeling approach/ Marcia Kirwan, Anne Matthews, P. Anne Scott/ 2013</i>	The study results show that a positive practice environment can improve patient safety outcomes by developing the ability to identify clinical risks. This study also concluded that nurse factors such as the education level of nurses and work environment must be recognized as important influences on patient safety, especially in identifying clinical risks. Some of the factors found in research are related to factors that can reduce the ability of nurses to identify clinical risks, including poor communication structures, leadership, and teamwork, lack of staff knowledge about safety processes, and recognition of a safety culture that does not support services.
10	<i>The factors associated with medication errors in adult medical and surgical inpatients: a direct observation approach with medication record reviews/ Marja Harkanen, Jouni Ahonen, Marjo Kervinen, Hannele Turunen, Katri Vehvilainen-Julkunen/ 2015</i>	The results showed, in identifying clinical risks that occur during treatment, it is likely that there are problems with treatment and nurses need training. Researchers explain that there is a relationship between medication errors and poor communication, lack of knowledge, and low peer support. Therefore, asking for help can be seen as a sign of good communication.

DISCUSSION

The results showed that 10 articles were identified (Table 2) and published in 2013-2022, and there were no articles published in 2014, 2018, 2021, and 2023. The results found 8 factors that could affect the ability of nurses to identify clinical risks in patients. Researchers then divided into 2 main factors, including intrinsic and extrinsic factors. The intrinsic factor in question is an internal factor that can influence a process or situation that comes from within the individual. Three intrinsic factors can affect the nurse's ability to identify clinical risks, including

psychological pressure, knowledge, and education and experience.

1. Intrinsic factor

a. Psychological pressure

Two articles discussed the effect of psychological distress on nurses' ability to identify clinical risks. The psychological pressure referred to is depression, work fatigue, and workload (Cheung & Yip, 2015; Johnson et al., 2017). Professionalism in work requires nurses to suppress their emotional expressions in the workplace to maintain an appearance of courtesy and uphold the image of the profession.



The ability nurses need to have is to make patients feel safe by reducing clinical risks that might occur, but the workload borne by these nurses can make their work more stressful (Johnson et al., 2017). Researchers believe that the psychological pressure experienced by nurses will often have an impact on the ability of nurses, one of which is to identify clinical risks that can occur.

b. Knowledge and Education

Knowledge and Education of nurses were identified in 3 articles in this literature study (Härkänen et al., 2015; Kirwan et al., 2013; Yoon & Lee, 2022). Knowledge is the basis of patient safety practice, as a study by Brasaite et al (2015) found that one of the main requirements in ensuring patient safety is the development and maintenance of medical professional safety knowledge. Additionally, unwanted patient outcomes can be avoided by ensuring knowledge sharing and facilitating error reporting among staff. So that the knowledge and education of nurses are considered to an influence on the ability of nurses to identify clinical risks.

c. Experience

Two studies explain that the experience possessed by nurses is important for their ability to carry out the care process, such as carrying out clinical risk identification (Ammouri et al., 2015; Hwang et al., 2019). Patient participation in health care is a promising strategy for improving patient safety and ensuring patient-centered health care. Experienced nurses tend to have higher competence for patient-centered care. The experience that nurses have will support the promotion of patient participation in the provision of patient-centered care (Kitson et al., 2013).

2. Extrinsic factors

a. Effective communication

The researcher found that the nurse's effective communication was the main factor affecting the nurse's ability to identify clinical risks. Five of the ten articles examined identified these findings (Ammouri et al., 2015; Groves et al., 2016; Han et al., 2020; Härkänen et al., 2015; Kirwan et al., 2013).

To create a culture of patient safety, many factors need to be achieved including effective communication. Effective communication and teamwork are important to eliminate the threat of clinical risk to patients (El-Jardali et al. 2011). Researchers believe, when a nurse communicates effectively while working, it will improve the nurse's ability to identify clinical risks that might occur.

b. Teamwork

This study found 2 articles discussing the importance of teamwork in identifying clinical risks in hospitals (Ammouri et al., 2015; Kirwan et al., 2013). Teamwork plays an important role in the cause and prevention of adverse medical events (Manser 2009). Effective communication and teamwork are very important to maintain a work environment and culture where nurses feel free to report patient safety issues because encouraging nurses to report incidents is very important to improve patient safety (Ballangrud et al. 2012; El-Jardali et al. 2011).

c. Organizational support

Two articles found organizational support to be an influence on nurses' ability to identify clinical risks (Härkänen et al., 2015; Yoon & Lee, 2022). This finding is supported by the results of previous research, which found that organizational support such as incident reporting culture, fair culture, and climate of safety, has a



significant influence on the reporting of safety events (Chiang et al., 2019; Kim & Yu, 2021; Lee et al., 2016).

d. Leadership style

This study found three out of ten articles discussing leadership styles that affect the ability to identify patient clinical risks (Kirwan et al., 2013; Lappalainen et al., 2020; Yoon & Lee, 2022). Labrague et al., (2021) stated that nursing leadership can significantly influence clinical risk identification actions by nurses and the quality of care. Ma et al (2020) reported that nurse managers need to develop leadership abilities in teams, set clear visions, motivate their team personnel, manage conflict and stress, be adaptable, and be able to manage change (Ma et al., 2020).

e. Work environment

The work environment has been shown to have a direct influence on the ability of nurses to identify clinical risks in patients (Kirwan et al., 2013; Yoon & Lee, 2022). This is shown by two related articles that have been researched. The work environment of nurses is defined by Lake (2002) as organizational characteristics in conducting work arrangements that facilitate professional nursing practice.

Other research evidence suggests that when nurses perceive their work environment to be supportive of patient safety, outcomes also improve. In other studies, a good work environment for nurses, such as adequate facilities, has been shown to result in a higher level of patient safety reported by nurses (Boyle, 2004). The results of this study prove that a good work environment for nurses has a positive impact on the ability of nurses to identify clinical risks.

CONCLUSION

This study found two main factors that can affect the ability of nurses to identify clinical risks, including intrinsic and Candra, et al (2023)

extrinsic factors. The biggest factor was found in extrinsic factors which found that effective communication was the main factor that could affect the ability of nurses to identify clinical risks in patients in the hospital.

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