

## Literature Review

### **Internal and External Factors Related to The Implementation of Patient Safety Goals: A Literature Review**

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**Abstract**

**Background:** Patient safety goals are important things that must be done by nurses to get a patient safety culture. Individual internal factors and external factors can influence nurses in carrying out patient safety goals.

**Objective:** This literature review study aims to discuss further internal and external factors that correlated in implementing patient safety goals by nurses.

**Methods:** The design used was literature review. The keywords are in two languages. The keywords for articles in Indonesian are “faktor yang mempengaruhi”, “sasaran keselamatan pasien”, “perawat”, “rumah sakit”. The keywords for English articles are "factor", "patient safety goals", "Nurse", “hospital”. There was conducted through three databases, including PubMed (13 articles), Google Scholar (482 articles in Bahasa), and Science Direct (110 articles). Articles limited from January 2015 to October 2021. Then the author re-sorted the articles according were free access and full text, in the form of original articles.

**Result:** There are 8 articles that appropriate with the criteria. Six articles are quantitative studies with a cross sectional approach and 2 articles with the SEM method. The results of the review show that there are 2 factors. Internal factors that correlated are motivation, knowledge and length of work. External factors that correlate are supervision and organizational culture.

**Conclusion:** Two factors correlated with patient safety goals implementation by Nurses. Further research that can be carried out as a follow-up study from this literature review is to determine interventions related to these two factors to achieve the maximum application of patient safety goals.

## INTRODUCTION

The World Health Organization (WHO) and several countries have agreed that patient safety goals are important things (Basri, 2021). Patient safety goals prevent injuries caused by errors due to harmful activity or dismiss the activity that considered to performed (Kemenkes RI, 2011). There are six patient safety goals, namely identifying patients accurately, improving effective communication, increasing the high alert medications safety, ensuring the correct surgery procedure, reducing the risk

of healthcare-related infections and reducing the risk of patient injury due to falls (Oktariani et al., 2021).

The application of patient safety goals performed by nurses in RSU Tangerang was less than 100%. The patient identification accuracy only 77.4% (24 nurses), 71% (22 nurses) implemented effective communication well, and 90.3% (28 nurses) implemented hand hygiene obediently. Overall, the patient safety implementation achievement target was 74.2% (23 nurses) (Setiyani et al., 2016). Nurses had an important role in implementing patient safety goals because nurses are health workers who interact with patients for 24 hours. Nurses are at the forefront of ensuring patient safety especially associate nurses in inpatients because nurses have the most frequent contact with patients compared to other health workers (Isnani & Rofi, 2014)

The success of nurses in implementing patient safety goals can be associated with various internal and external factors. According to Oktariani et al., (2021), the nurse's internal motivation is one of the internal factors that correlate with the nurses' behaviour in implementing patient safety goals. Another factor is the facilities and infrastructure of the hospital in supporting the patient safety goals implementation by nurses (Astarini, 2021) Facility such as Standard Operational Procedure for preventing patient fall is needed by the nurse to implement the patient safety goals (Budiono, Sugeng; Alamsyah, Arief; S, 2013). Other, support for facilities and infrastructure expressed by the participants is the presence of a sink for hands washing to prevent the risk of infection (Astarini, 2021). This literature review study aims to discuss further internal and external factors that influence nurses' patient safety goals implementation.

## **METHODS**

The design used was a literature review. PICO criteria (Population, Intervention, Comparison, and Outcome) were used to develop eligibility criteria for study inclusion and exclusion. Population: Nurse in a hospital, Intervention: there was no Intervention just to know the correlation, Comparison: there was no comparison, Outcome: the factor that correlates with the patient safety goals implementation. Other criteria are the method: a quantitative study

The keywords are in two languages. The keywords for articles in Indonesian are “faktor yang mempengaruhi”, “sasaran keselamatan pasien”, “perawat”, “rumah sakit”. The keywords for English articles are "factor" AND "patient safety goals" AND "Nurse" AND “hospital”. The searching process was conducted through three databases, including PubMed (13 articles), Google Scholar (482 articles in Bahasa), and Science Direct (110 articles). The articles were limited from January 2015 to October 2021. Then the articles were re-sorted according to free access and full text, in the form of original articles. The article was narrowed down by eliminating duplication and adapted to PICO, focusing on factors related to implementing patient safety goals. Articles deemed appropriate by the reviewers were used in this literature review. The article selection process and results are presented in the PRISMA diagram in (figure 1).

Records were then filtered through titles and abstracts to exclude review articles and adjustment criteria. The full-text article was reviewed to study the article feasibility. Articles deemed appropriate by the reviewers were used in this literature review. Eight articles that match the needs of the author were found. Then the authors sort the articles found from the newest.

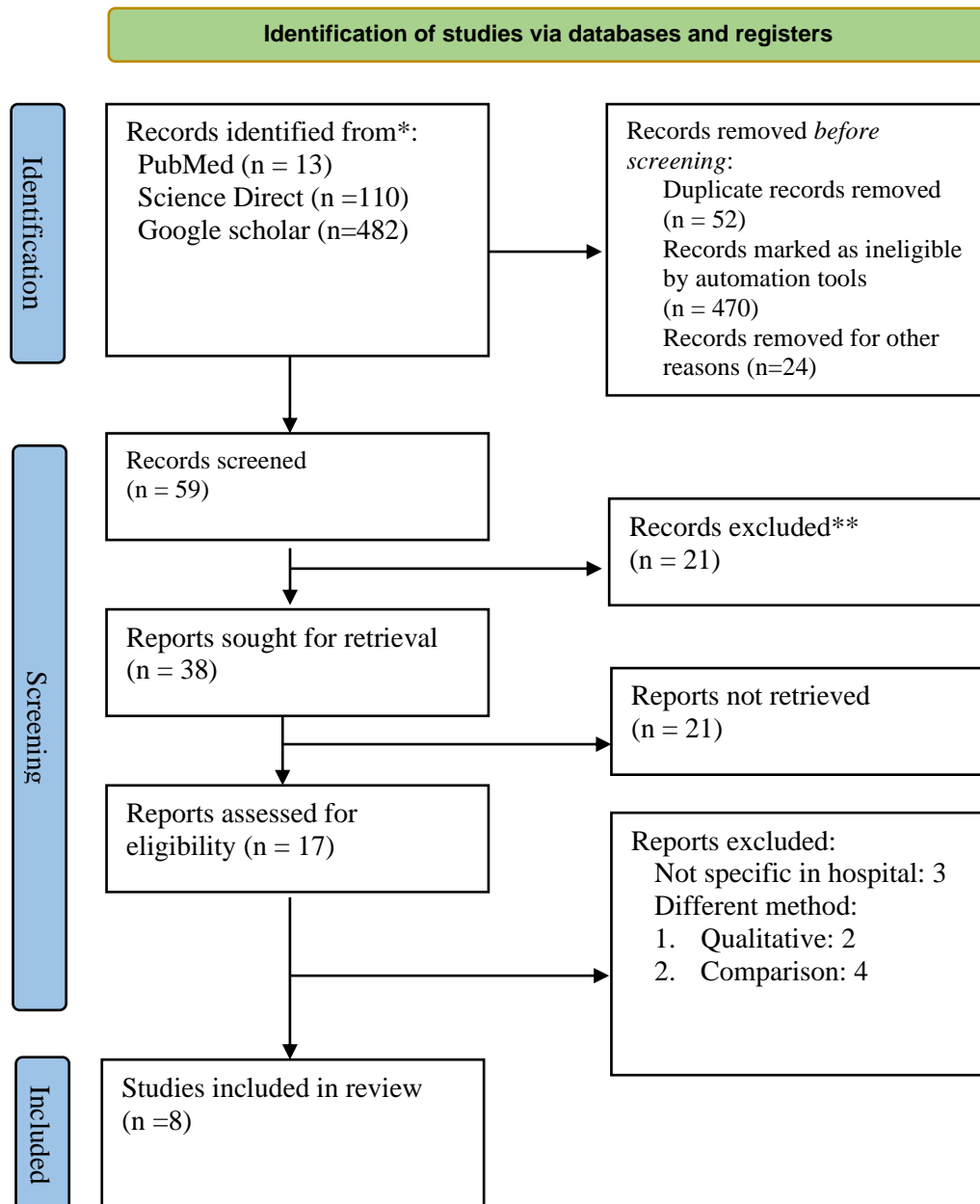


Figure 1. PRISMA Flow Chart of Search Outcome

## RESULTS

The article review results showed that 2 factors influence the implementation of patient safety goals, namely internal factors related to the characteristics of nurses and external factors, namely outside of nurses.

<b>Author</b>	<b>Goals</b>	<b>Method</b>	<b>Findings</b>
Pambudi, 2018 (Inpatient Hospital Panti Waluya, Malang)	This study purpose was to determine the factors that influence nurses in implementing the 6 patient safety goals	Quantitative with cross sectional approach	Based on the results of Bivariate analysis, the factors that influence the 6 patient safety goals were the dependency level (p=0.018), length of work (p=0.018), nurses' knowledge (p=0.002), nurse's motivation (p=0.019), supervision (p=0.001), and organizational influence (p=0.029). Based on the results of multivariate analysis, the most dominant factor was Knowledge (OR=17,299)
Suryani et al., (2021) (Hospital in Kerawang Indonesia)	This study aims to analyze factor associated to the implementation of patient safety goals among nurses at X Hospital Karawang	Quantitative with cross sectional approach	A significant relationship between knowledge, supervision, motivation, and the patient safety goal implementation (p-value < 0.05). Based on the results of the p value test, there was a relationship between knowledge, motivation and supervision with the implementation of patient safety
Sarasanti et al., (2018) (in-patient Hospital in Jakarta)	To analyze the factors that influence the implementation of patient safety goals by paramedics in the inpatient installation of RS X that affect patient safety incidents.	Quantitative with cross sectional approach	Supervision variables (p=0.033), facilities (p=0.000), and organizational culture (p=0.000) had a significant correlation on patient safety goals
Bangun K, Dewi S., (2019) (RS PGI Cikini)	This study aims to determine the factors that influence the nurses' behavior in carrying out patient safety related to drug administration in the PGI Cikini Hospital treatment room.	Quantitative with cross sectional approach	The nurses' behavior in carrying out patient safety related to drug administration in the treatment room was the most dominantly influenced by the social/organizational environment (p = 0.007; B coefficient 0.424; 95%CI 0.121-0.727)
Lee, (2020) (Long-term facilities in Korea)	This study aimed to explore the factors that influence patient safety activities of the RNs and NAs working in LTC	Quantitative with cross sectional approach	There was a significant correlation between patient safety culture and patient safety activities (r = .23, p = .004). Factors influencing patient safety activities among

Author	Goals	Method	Findings
	facilities and to identify the relationship between patient safety culture (PSC) and patient safety activities.		RNs and NAs in LTC facilities were registered nurse ( $\beta = .377, p < .001$ ), organizational system of PSC ( $\beta = .314, p < .010$ ), and work sift type (fixed night shift, on-call, 24-hour shift) ( $\beta = -.264, p = .004$ ), which explained about 36.0% of total variance ( $F = 5.69, p < .001$ ).
Nurmaini et al., (2021) (X hospital, not mention clearly)	This study aims to analyse the significant influence together Knowledge, Spiritual Intelligence, and Attitude on the Quality of Work Life and the Impact on Nurse Performance in the Application of Patient Safety	A quantitative approach with the path analysis method using the Structural Equation Modelling (SEM) equation.	The results showed that Knowledge, Spiritual Intelligence, and Attitude had a significant influence together on the quality of work life impacted on nurse performance to implemented patient safety goals.
Huh & Shin, (2021) (Geriatric Hospital in Korea)	The aim of this study was to investigate the relationships between person-centred care practice, patient safety competence, and patient safety during nursing activities in geriatric hospitals.	A quantitative study using a t-test, one-way ANOVA, Pearson's correlation coefficient, and multiple regression.	The result found that patient safety skills ( $\beta = 0.417, p < 0.001$ ), and age ( $\beta = 0.209, p = 0.035$ ) are key factors that influence patient safety during nursing activities.
Sugiatno & Rahayu, (2020) (Emergency Room Installation of RSUD dr. Dradjat Prawiranegara)	This study aims to determine the factors related to the behavior of implementing patient safety on nurses in the Emergency Room at RSUD dr. Dradjat Prawiranegara in 2018.	Quantitative with cross sectional approach	The results of the bivariate analysis showed that there was a significant relationship between knowledge (P value = 0.002), attitude (P value = 0.003) and years of service 5 years (P value = 0.027) with the behavior of applying patient safety to nurses.

## DISCUSSION

### Internal factors that affect the implementation of Patient Safety Goals

Identified in this review the first internal factor that influences the implementation of the standardized steps to maintain patient safety goals is the nurses' motivation. A positive relationship between the nurses' motivation and the implementation of patient safety goals was identified in a

study by Oktariani et al., (2021) ( $p = 0.001$ ). The motivation of nurses is at a high level so that it supports the attitude of nurses in implementing patient safety goals. Similar findings are also identified in a study by Pambudi (2018), which states that motivation correlates with implementing patient safety goals. A total of 88 (71.0%) respondents had high motivation. Intrinsic motivation such as nurses trying their best to get good results, self-development and increasing success is the basis for nurses in implementing patient safety goals (Pambudi, 2018).

The second-identified internal factor was the nurses' knowledge. The study results showed there was a significant relationship between knowledge and the implementation of the 6 patient safety goals ( $p = 0.002$ ) (Pambudi, 2018). In addition, according to Suryani et al. (2021), nurses' knowledge is related to the patient safety goals application ( $p = 0.038$ ), nurses with high knowledge implement patient safety goals better than nurses with moderate and low knowledge. According to Nurmaini et al. (2021), Nursing care knowledge and education have a positive correlation on the application of patient safety goals. It is mean that the higher the knowledge, the better the patient safety goals application. Research conducted by Nur et al., (2019), showed that 80% of nurses had less knowledge and did not achieve patient safety goals, with  $p=0.021$  which means that there was a relationship between nurse knowledge and the patient safety goals implementation. Likewise, the results of research by Sugiatno & Rahayu, (2020), showed that knowledge was related to the nurses' behavior in implementing patient safety goals ( $p = 0.002$ ).

The third factor is the length of work. According to Sugiatno & Rahayu, (2020) and Pambudi (2018), the length of work has a significant effect on the implementation of patient safety goals ( $p = 0.027$  and  $p = 0.018$ ).

### **External factors that affect the implementation of Patient Safety Goals**

The external factor that influences the patient safety goals implementation is supervision by head nurse. The results of research by Sarasanti et al., (2018), showed that supervision influenced the implementation of patient safety goals ( $p = 0.001$ ). Supervision carried out by the head nurse increases nurse awareness and motivates nurses in implementing patient safety goals. Pambudi, (2018) also stated that the supervision influenced the application of patient safety goals ( $p = 0.001$ ). In the category of implementing good safety targets, 36 (29.0%) respondents had less supervision, and 54 (43.5%) had good supervision. Similarly, according to Suryani et al., (2021), Supervision from head nurses will influence 8.5 times for nurses to achieve patient safety goals. Supervision is a way to build professional interaction and communication between nursing supervisors and implementing nurses. In supervision, nurses receive guidance, support, assistance, and trust from the head nurse to provide safe care to patients (Suryani et al., 2021).

Another external factor is organizational culture/organizational factors. According to Pambudi (2018), the patient safety goals application is influenced by organizational factors ( $p = 0.029$ ). This is also explained by Sarasanti et al., (2018) which stated that organizational culture has an influence on

the implementation of patient safety goals ( $p = 0.001$ ). A total of 515,637 respondents from 1,052 hospitals completed the Patient Safety Culture Survey, assessing perceptions of organizational factors that affect patient safety (Pambudi, 2018). Another study conducted by Bangun K, Dewi S., (2019) also stated that organizational factors had an influence on the implementation of patient safety goals ( $p = 0.007$ ). According to Lee (2020), organizational systems had a significant influence on the implementation of patient safety goals related to patient safety culture ( $\beta = .314, p < .010$ ). Patient safety culture influences attitudes and behavior of employees, regarding adherence of patient safety regulation and the practice of patient safety activities within the organization.

## **LIMITATION**

Further research that can be conducted as a follow-up study from this literature review is to determine interventions related to these two factors to achieve optimum application of patient safety goals.

## **CONCLUSION**

Based on the literature review results of 8 appropriate articles, it was concluded that there are 2 factors that influence the implementation of patient safety goals: internal and external factors. Internal factors that influence is intrinsic motivation from the nurse, nurse's knowledge about patient safety goals and length of work. External factors that influence is supervision by the head of nurse and organizational culture.

## **AUTHOR CONTRIBUTION**

Made Indra Ayu Astarini : Conceptualization, methodology, writing-original draft, supervision, formal analysis, investigation and writing-review and editing

M.T Arie Lilyana : Visualization, project administration, software, validation, resources, data duration, and funding acquisition

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## **CONFLICT OF INTEREST**

The authors have consented and no conflicting interests.

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