

Factors influencing health worker compliance in implementing patient safety goals in Indonesia: Systematic review

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ABSTRACT

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The compliance rate of health workers in patient safety is not fully good at 68.7% and the implementation of patient safety in Indonesia is not optimal at 74.2% whereas in 2016 in Indonesia there were still 31 cases related to patient safety. To determine the factors that affect the compliance of health workers in the implementation of patient safety goals using a systematic review approach. This study uses a systematic review method from 9 studies using a quantitative approach commonly called a meta-analysis. The search for the source of this research data uses PRISMA flow charts from several databases such as Google Scholar, Garuda portal, ProQuest, and Elsevier. Where published in the last 10 years (2013-2023). 25 variables were the same in the study between one researcher and another, namely age, gender, marital status, number of dependents, length of work, nurse knowledge, nurse motivation, supervision, nursing, organizational influence, educational status, compliance behavior, ability, supervisor support, fellow nurse support, workplace comfort, employment status, motivation, perception, nurse compliance, 6 patient safety goals, patient safety culture, patient identification, patient safety events, and patient fall prevention. The average P-Value value is 0.180, the minimum value of P-Value = 0.000, and the maximum value of P-Value = 0.995. 8 dominant factors influence health workers in implementing patient safety goals. 8 dominant factors influence health workers in implementing patient safety goals, namely knowledge, length of work, nurse work motivation, nurse perception, stress level and workload, nurse compliance, organizational influence, and supervisor support.

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INTRODUCTION

A health worker is someone who is devoted to the health sector and has knowledge and / or skills through education in the health sector (Pesulima & Hetharie, 2020). Law number 36 of 2014 explains that health workers are the frontline in providing health services to people who have special skills and competencies in accordance with their fields (Presiden RI, 2014). Health service is an activity or effort carried out alone or jointly in improving health, preventing or restoring disease. Health services can be said to be successful if they are available and sustainable, acceptable and reasonable, easy to reach, and of good quality (Telaumbanua, 2020). So that with the existence of good health services, compliance from existing health workers is needed (Puspita et al., 2017).

Health worker compliance is a term used to describe the behavior of health workers in performing health services (Retnaningsih & Nuryanto, 2012). Factors that affect the compliance of health workers in carrying out health services are respondents' knowledge and respondents' attitudes (Amalia et al., 2016). In addition, the compliance rate of health workers in October 2014 was 48.2% where the compliance rate was still very far from the target of achieving 100% (Amalia et al., 2016). Good compliance of health workers will benefit the hospital which can improve the quality of hospital services so that the hospital's operational permit continues to run and patient safety is maintained (Hidayah & Ramadhani, 2019).

Safety has become a global issue including for hospitals where safety related to hospitals is the safety of workers or health workers, the safety of buildings and equipment, and the patient safety (Widiasari et al.,

2019). According to government regulation number 1691 of 2011 explains 6 patient safety targets: accuracy of patient identification, improvement of effective communication, improvement of drug safety that needs to be watched out for, certainty (right-location, right-procedure, right patient surgery), reducing the risk of infection related to health services and reducing the risk of patients falling (Presiden RI, 2011). Patient safety is very important for hospitals where activities in the hospital can run if there are patients and for hospitals patient safety can also improve the quality and image for the hospital (Susilo, 2015).

The implementation of patient safety in 11 hospitals from 5 countries, there were 52 incidents patient safety namely Hong Kong 31%, India 23%, America 12%, Australia 25% and Canada 10%. In Indonesia in 2000 the KTD rate varied widely from 8.0% - 98.2% for misdiagnosis and 4.1% - 91.6% for medication errors and in 2007 the highest KTD rate was in DKI Jakarta province with 37.9% and the smallest KTD rate was in South Sulawesi province with 0.7% (Sibarani, 2020). In August 2016 in Indonesia the number of patient safety incidents amounted to 31 cases (Surahmat et al., 2019).

The achievement of patient safety implementation was good at 74.2% but still not optimal and consistent in achieving the 100% target (Setyani et al., 2017). The implementation of patient safety at Ajjappanngge Soppeng Hospital in 2015 was 54.7% so it is necessary to improve the implementation of patient safety in hospitals (Rivai et al., 2016). A small percentage of respondents 44.1% are still poor in implementing patient safety, so there is a need for increased evaluation and monitoring (Miko Eka Putri, 2018). The incidence of patients falling in 2015 in the 1st to 4th quarters in a row there were falling incidents where according to KPI data the incidence of pressure injuries originating from hospitals was 0.05% (Widiasari et al., 2019). So, the implementation of patient safety that has not been achieved can be due to health workers who still do not understand well things related to patient safety efforts (Ulumiyah, 2018).

Data on the level of compliance of health workers in SOP knowledge and patient safety is not entirely good at 68.7% where health workers who have good knowledge are still mostly less compliant in implementing patient safety implementation (Pagala et al., 2017). The level of compliance of health workers in building a patient safety culture can be influenced by predisposing factor which consists of knowledge, attitudes, workload, and work environment (Maryati & Hidayah, 2021).

Based on the above background, the purpose of this study is to use a systematic review approach to determine the factors that affect the compliance of health workers in the implementation of patient safety targets. The researchers hope that this study will give more insight into health workers compliance, patient safety, and their better implementation in the future.

METHOD

The method used in this study is systematic review using a quantitative approach or commonly called meta-analysis (Perry & Hammond, 2002). Where the search for the source of this research data uses PRISMA flow charts derived from several full-text literature on the internet and published in several databases such as Google Scholar, Garuda Portal, ProQuest, and Elsevier. Where published in the last 10 years (2013-2023). As well as focusing on factors that affect the compliance of health workers in implementing safety goals in Indonesia.

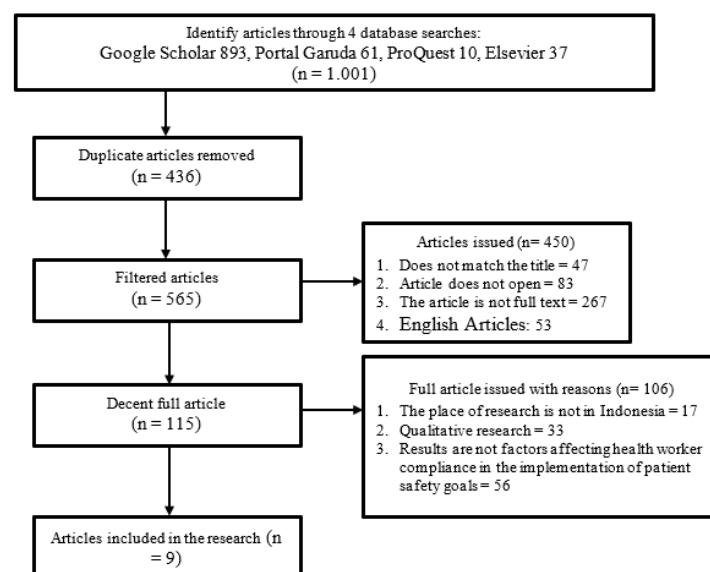


Figure 1. PRISMA Method Article Search and Selection Flow Chart

RESULTS AND DISCUSSION

The results of the study can be seen in the following table.

Table 1. Place of study, methods, variables studied, relevant variables, cases

Researchers	Research Sites	Method	Variables Under Study	Relevant Variables	Case
Researcher 1 (Pambudi et al., 2018)	RS. Panti Waluya Malang	Quantitative, Descriptive Analytical Research with a cross-sectional approach	Age	1) Nurse Compliance 2) 6 Patient Safety Goals	1) KTC : 36,84% 2) KPC : 21,05% 3) KTD : 15,79%
			Gender		
			Marital Status		
			Number of Dependents		
			Length of Work		
			Nurse Knowledge		
			Nurse Motivation		
			Nursing Supervision		
			Organizational Influence		
			Predisposing Factors		
Researcher 2 (Maryati & Hidayah, 2021)	Gambiran Regional Hospital Kediri City	Quantitative research with a cross-sectional approach	Enablings Factors	1) Health Workforce Compliance 2) Patient Safety Culture	Incompleteness of Medical Record Filling
			Reinforcing Factors		
			Compliance Behavior		
Researcher 3 (Harina, 2018)	East Java Private Hospital	Quantitative research with a cross-sectional approach	Age	1) Health Worker Compliance Level 2) Patient Identification	1) Errors in drug administration 2) Does not provide clear information 3) No monthly reporting related to patient safety
			Gender		
			Length of Work		
			Education		
			Knowledge Level		
			Ability level		
Researcher 4 (Pagala et al., 2017)	X Kendari Hospital	Quantitative research	Age	1) Nurse Compliance 2) Patient Safety Events	1) Errors in laboratory examination (2 cases) 2) Patients fell out of bed (12 cases) 3) Patients fell from the bathroom (3 cases)
			Education Level		
			Period of Service		
			Competence		
			Knowledge		
			Attitude		
			Supervisor Support		
			Fellow Nurse Support		

				Workplace Comfort	4) Errors in the administration of blood kolf series (1 case) 5) Patients hit in ambulance (2 cases) 6) Errors in drug administration (1 case) 7) Late prescription redemption (1 case)
Researcher 5 (Faridha & Milkhatun, 2020)	Samarinda Government General Hospital	Quantitative research, Descriptive Correlation with cross-sectional approach	Age Gender Education Period of Service Employment Status	1) Nurse Knowledge 2) Nurse Compliance 3) Prevention of Fall Patients	1) 40 recorded incidents 2) 2 cases of incident of falling patients
Researcher 6 (Hasanah, 2020)	Hospital "X"	Quantitative research	Age Gender Marital Status Number of Dependents Length of Work Nurse Knowledge Nurse Motivation Supervision Organizational Influence	1) Nurse Knowledge 2) 6 Patient Safety Goals	1) Number of Patient Safety Incidents Totaling 171 Cases 2) 65.5% related to mistaken identity 3) 60% Occurs in the treatment room 4) 56.7% occurred in areas of specialization
Researcher 7 (Nazvia et al., 2014)	Gambiran Hospital Kediri City	Quantitative research, pendekatan cross-sectional	Age Length of Work Education Level Motivation Persepsi Nurse Compliance Rate	Nurse Compliance Rate	The nurse has not carried out her duties in accordance with the SOP
Researcher 8 (Nasution et al., 2022)	Dr. Kumpulan Pane Hospital Tebing Tinggi City	Quantitative research, pendekatan cross-sectional	Age Gender Marital status Length of work Knowledge Supervisi	Knowledge Patient Safety	The number of patients that is increasing every year is not the same as the number of existing nurses where the condition is a challenge for hospitals in improving services, especially in patient safety and healing.
Researcher 9 (Yulidar et al., 2019)	Royal Prima Jambi Hospital	Quantitative research, cross-sectional approach	Knowledge Attitude Facilities Length of work	Knowledge Patient Safety	Based on the results of patient safety incident data in 2017 caused by incidents of errors in drug

administration, and procedures were not carried out correctly.

Based on table 1 above, there are 25 variables that are the same in the study between one researcher and another, namely age, gender, marital status, number of dependents, length of work, nurse knowledge, nurse motivation, supervision, nursing, organizational influence, educational status, compliance behavior, ability, supervisor support, fellow nurse support, workplace comfort, employment status, motivation, perception, nurse compliance, 6 patient safety goals, patient safety culture, patient identification, patient safety events, and patient fall prevention.

Table 2. Number of Variables Studied and Number of Relevant Variables

Researchers	Number of Variables Studied	Number of Relevant Variables
Researcher 1	9	2
Researcher 2	5	2
Researcher 3	6	2
Researcher 4	9	3
Researcher 5	5	2
Researcher 6	9	2
Researcher 7	6	1
Researcher 8	6	2
Researcher 9	4	2
Average	6,55	2
Minimum Value	4	1
Max Value	9	3

Based on table 2 above, the average number of variables studied was 6.55 (25 variables), while the number of relevant variables was 2 (7 variables). So that compared to the variables studied, the relevant variables are less than half of the variables studied. The smallest variables studied were 4 variables and the most variables studied were 9 variables. The smallest relevant variable studied was 1 variable and the most relevant variables studied were 3 variables.

Table 3. Number of Variables Studied and Number of Relevant Variables

Researchers	Research Variables	f (%)	Sig.	p-value
Researcher 1	Number of Dependents	61,3	0,449	0,995
	Length of Work	90,3	0,224	0,018
	Nurse Knowledge	68,5	0,025	0,002
	Nurse Motivation	94,4	0,624	0,019
	Supervisi	50	0,000	0,001
	Organizational Influence	36,3	4,995	0,029
Researcher 2	Predisposing Factors → of Patient Safety Culture	-	1,538	0,063
	Enabling Factors → of Patient Safety Culture	-	6,699	0,123
	Reinforcing Factors → of Patient Safety Culture	-	4,787	0,000
Researcher 3	Compliance → Knowledge	66,7	0,001	0,371
	Compliance → Capabilities	56,9	0,001	0,457
Researcher 4	Knowledge	92	0,007	0,007
	Supervisor Support	90	0,001	0,000
	Fellow Nurse Support	67	0,002	0,005
Researcher 5	Knowledge (Good)	58,8	-	
	Compliance (Compliant)	70,6	-	
	Compliance → Knowledge	-	-	0,038
Researcher 6	Age	58,9	-	0,995
	Gender	53,2	-	0,407
	Marital Status	83,9	-	0,658
	Number of Dependents	61,3	-	0,016
	Length of Work	90,3	-	0,012
	Nurse Knowledge	68,5	-	0,002

	Nurse Motivation	94,4	-	0,007
	Supervision	50	-	0,000
	Organizational Influence	63,7	-	0,025
Researcher 7	Motivation	47,4	0,045	0,040
	Perception	57,9	0,049	0,026
Researcher 8	Young age	57,3	0,000	0,114
	Gender: Female	61,3	0,000	0,604
	Marital status Married	48,0	0,000	0,276
	Long working time	50,7	0,000	0,576
	Good Knowledge	41,3	0,000	0,318
Researcher 9	Good Supervision	40	0,000	0,291
	Knowledge	100	0,004	0,008
	Behavior	100	0,000	0,000
	Facilities	100	0,000	0,000
	Length of work	100	0,001	0,002
	Average	68,55	0,748	0,180
	Minimum Value	36,6	0,000	0,000
	Max Value	100	6,699	0,995

Based on table 3 above, the average Pearson Chi-square test result can be a significant value (p-value) of 0.180. The most dominant factors affecting the compliance of health workers in the implementation of patient safety goals based on p-value include Nurse Knowledge (p-value=0.002), Supervision (p-value=0.001), Reinforcing Factors (p-value=0.000), Supervisor Support (p-value=0.000), Fellow Nurse Support (p-value=0.005), Nurse Motivation (p-value=0.007), Attitude (p-value=0.000), Facilities (p-value=0.000), and Length of work (p-value=0.002).

Discussion

Knowledge becomes a predisposing factor that will affect a person's health practice where the higher a person's knowledge, the better the nurse's compliance to carry out patient safety (Yulidar et al., 2019). The success of implementing patient safety can be achieved if nurses know exactly something that can threaten patient safety during the hospital treatment period where good knowledge will greatly affect the behavior and application of nurses in providing nursing care while still prioritizing patient safety (Nasution et al., 2022). The knowledge of nurses with nurse compliance in implementing SPO for fall risk prevention has a meaningful relationship where in increasing knowledge, extensive training is needed to improve nurses' performance (Hasanah, 2020). In increasing nurses' knowledge to implement patient safety goals, regular seminars and training on patient safety goals are needed and conducting optimal supervision to improve the quality of health services (Arruum et al., 2015). A nurse who has good knowledge tends to be better at implementing 6 SKP compared to nurses who have low knowledge (Pambudi et al., 2018).

The length of work can be one of the predisposition factors that can influence a person's behavior and the longer a person works, the more proficient he will be in implementing patient safety in hospitals where the length of work itself can be related to the experience gained at work (Hasanah, 2020). A long period of work will provide a positive work experience for their work, including nurse compliance will increase in implementing patient safety procedures (Pambudi et al., 2018). The longer nurses work, the more they can increase productivity who are considered to have understood the work patterns in their work environment well and strongly support nurses in implementing patient safety goals, especially the implementation of patient fall prevention since being declared part of nursing services at the hospital (Faridha & Milkhatun, 2020).

Nurse work motivation has a significant effect on job satisfaction where the imposition of reward and punishment on nurses greatly affects nurse performance in implementing patient safety nursing care (Nazvia et al., 2014). Work motivation also has a significant influence on a person's performance where a highly motivated nurse will work optimally by utilizing his abilities and skills (Pambudi et al., 2018).

The perception of nurses in carrying out their work can affect the environment such as being able to provide nursing services for patient safety properly where there are several factors that can lead to perception, namely attitudes, motives, interests, experiences and rewards (Nazvia et al., 2014). However, another research stated that nurses' perceptions regarding the support of fellow nurses are still very lacking, especially in compliance with carrying out SOPs for the risk of falling patients because there are still small groups in getting along, unable to create good communication, and lack of willingness to exchange information about SOPs for the risk of patients falling (Pagala et al., 2017).

High levels of stress and workload can cause less than optimal nursing care provided to patients which will increase the number of violations related to patient safety and more frequent errors will occur (cognitive failure) (Maryati & Hidayah, 2021). In general, the number of dependents is one of the factors causing women to voluntarily make decisions to get more income for their families so that their family needs are met, but the higher the number of dependents, the higher the conflict in the household so that it can cause stress when working for nurses and can cause a lack of nurses in implementing the 6 SKP patient safety targets (Pambudi et al., 2018).

Nurse compliance (behavior, character and attitude of a person) which is reflected in his daily attitude in accepting something will affect the obedience or disobedience of a nurse in carrying out the rules that apply around him (Faridha & Milkhatun, 2020). Obedience is obtained after a person gains knowledge and knowledge is obtained from education and experience from various sources (Harina, 2018). In addition, organizational influence in terms of management, job descriptions and relationships between nurses can have a significant effect on the implementation of patient safety goals in hospitals (Hasanah, 2020). The implementation of good patient safety goals is supported by supervisor support where nursing supervisors will carry out supervision activities according to schedule and can help increase nurses' knowledge in implementing patient safety goals for nursing actions (Nasution et al., 2022).

CONCLUSION

This study concluded that there are 8 dominant factors that influence health workers in implementing patient safety goals, namely knowledge, length of work, nurse work motivation, nurse perception, stress level and workload, nurse compliance, organizational influence, and supervisor support. This study recommends that further researchers examine 8 dominant factors that can influence health workers in implementing patient safety goals.

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