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The Relationship Between Nurses' Knowledge And Motivation With The Implementation Of Patient Safety

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Keselamatan pasien merupakan indikator utama mutu pelayanan rumah sakit. Pengetahuan dan motivasi perawat berperan penting dalam mendukung penerapan *patient safety*, namun dalam pelaksanaannya dipengaruhi oleh beberapa faktor lain seperti organisasi, beban kerja, dan lingkungan kerja. Penelitian ini bertujuan untuk menganalisis hubungan pengetahuan dan motivasi perawat dengan pelaksanaan *patient safety*. Penelitian ini menggunakan desain kuantitatif deskriptif korelasional dengan pendekatan *cross-sectional*. Sampel penelitian berjumlah 38 perawat yang dipilih menggunakan teknik *total sampling*. Instrumen penelitian menggunakan kuesioner pengetahuan, motivasi, dan pelaksanaan *patient safety* yang diadopsi dari penelitian sebelumnya dan telah diuji validitas serta reliabilitasnya. Analisis data dilakukan menggunakan *Fisher's Exact Test* dengan tingkat signifikansi $p < 0,05$. Hasil penelitian menunjukkan sebagian besar perawat memiliki pengetahuan baik (81,6%), motivasi tinggi (65,8%), dan pelaksanaan *patient safety* yang baik (65,8%). Terdapat hubungan yang signifikan antara pengetahuan perawat dengan pelaksanaan *patient safety* ($p = 0,004$) serta antara motivasi perawat dengan pelaksanaan *patient safety* ($p = 0,003$). Simpulan: Pengetahuan dan motivasi perawat berhubungan secara signifikan dengan pelaksanaan *patient safety*. Hasil penelitian ini dapat menjadi dasar bagi rumah sakit dalam memperkuat budaya keselamatan pasien melalui pelatihan dan penguatan sistem organisasi.

The Relationship Between Nurses' Knowledge And Motivation With The Implementation Of Patient Safety

Patient safety is a key indicator of hospital service quality. Nurses' knowledge and motivation play a crucial role in supporting patient safety implementation, but their implementation is influenced by several other factors such as organization, workload, and work environment. This study aims to analyze the relationship between nurses' knowledge and motivation and patient safety implementation. This study used a quantitative descriptive correlational design with a cross-sectional approach. The sample consisted of 38 nurses selected using a total sampling technique. The research instrument used a questionnaire on patient safety knowledge, motivation, and implementation, adopted from previous studies and tested for validity and reliability. Data analysis was performed using Fisher's Exact Test with a significance level of $p < 0.05$. The results showed that most nurses had good knowledge (81.6%), high motivation (65.8%), and good patient safety implementation (65.8%). There was a significant relationship between nurses' knowledge and patient safety implementation ($p = 0.004$) and between nurses' motivation and patient safety implementation ($p = 0.003$). Conclusion: Nurses' knowledge and motivation are significantly related to patient safety implementation. The results of this study can be a basis for hospitals in strengthening patient safety culture through training and strengthening organizational systems.

Introduction

Patient safety is an order that is prepared to maximize safety in patient care. This system includes hazard assessment, identification and control of patient risk, recording and analyzing incidents, capacity to absorb lessons from incidents and take steps, along with the actualization of solutions aimed at reducing potential hazards and preventing injuries due to errors in implementation or forgetfulness of procedures that should have been carried out not taken (Permenkes, 2017). Patient safety is a global priority reflected in the policies of the World Health Organization (WHO) and Indonesia's national patient safety program, emphasizing the importance of the competence and commitment of health workers in preventing incidents that harm patients.

The Theory of Planned Behavior explains that knowledge shapes a nurse's positive attitude towards safety protocols, while motivation reflects behavioral intentions that are influenced by organizational norms and perceptions of self-control. *The Health Belief Model* underlies the understanding that nurses will implement patient safety when they understand the benefits, obstacles, and confidence in their ability to carry out preventive measures. In addition to individual knowledge and motivation, work environment factors such as hospital organizational culture, institutional policies, workload, and supervision system also significantly affect the implementation of patient safety. Knowledge is one of the most important elements in the implementation of patient safety. Nurses who understand various aspects of patient safety while obtaining hospital inpatient services can generally be pressured through the provision of high-quality services and the placement of patient safety aspects as a top priority. Factors that can affect a person's understanding include teaching, information vehicles, age, socio-cultural and financial domain, residence, and curriculum vitae (Amalia et al., 2021). In addition to knowledge, motivation also plays an important role in ensuring that nurses can apply patient safety principles consistently and optimally.

Motivation is a state in an individual or organism that encourages behavior towards a goal, which has three aspects, namely the state of drive in the organism (*adrive state*), readiness to move due to physical needs, environmental conditions, or mental conditions such as thinking and remembering. There are two factors that affect motivation, namely intrinsic factors and extrinsic factors. Intrinsic factors are factors that arise from the individual himself such as age,

education and knowledge. Extrinsic factors are factors that affect individuals from the outside, such as employment, social status, and culture. Lack of knowledge and low motivation can reduce the quality of patient *safety implementation* (Amalia et al., 2021). In addition to individual factors, the structural aspects of hospitals such as institutional policies, supervision systems, resource availability, and safety culture play a significant role in supporting or hindering the implementation of patient safety. Studies in regional hospitals with similar characteristics revealed that despite the high knowledge and motivation of nurses, the implementation of patient safety was not always optimal due to structural constraints such as overload, staff limitations, and lack of managerial support. Analysis of these external factors is important to provide a holistic picture of the challenges of implementing patient safety in various healthcare contexts.

World Health Organization (WHO) revealed that every year, approximately 2.6 million people experience incidents that result in 2.6 million deaths in countries with a medium level of development. In Indonesia, in 2019 there were 7,465 reports of incidents related to patient safety, which included 171 deaths, 80 incidents with serious injuries, 372 moderate injuries, 1,183 minor injuries, and 5,659 without injuries (Allo et al., 2024). Information obtained from the KKP-RS in 2020 explained that there were 145 incidents related to patient safety recorded in various provinces in Indonesia, with Jakarta recording the highest percentage at 37.9% (KKPRS, 2015). Some of the studies that have been researched include the results of Fitria Fansiska's research (2021) at Dr. Adnaan WD Payakumbuh Hospital showing that although 78.12% of nurses have good knowledge and 81.25% have high motivation, the implementation *of good patient safety* is only carried out by 68.8% of nurses. This means that around 31.2% of nurses still do not implement *patient safety* properly, despite having a good background of knowledge and motivation. In addition, there are still patient safety incidents such as nosocomial infections, medication misadministration, and near-injury incidents. The results of this study show that knowledge and motivation are significantly related to the implementation of patient safety. Another study by Anriani (2019), at Panti Waluya Sawahan Hospital Malang, obtained the results of 200 participants on the safety knowledge of hospital patients, most (89%) received poor scores (60%) and the rest (11%) received good scores (>75).

In this study, knowledge is defined as the nurse's theoretical and practical understanding of patient safety concepts, principles, and procedures, covering six safety goals (patient identification, effective communication, medication safety, procedural accuracy, infection reduction, and fall prevention) as well as the ability to identify risks and implement prevention protocols. Motivation is defined as the internal (intrinsic) and external (extrinsic) drives that influence nurses in implementing patient safety. Intrinsic motivation includes professional awareness, commitment to service quality, and satisfaction from safe practices, while extrinsic motivation includes a reward system, organizational recognition, supervision, and a conducive work environment. Patient safety implementation is measured through the practical implementation of six safety goals in daily nursing activities, adherence to protocols, incident documentation, and proactive risk-prevention behavior. This study uses a comprehensive approach in measuring nurse motivation, covering intrinsic and extrinsic dimensions measured through validated instruments with high reliability (*Cronbach's Alpha* 0.848).

This research can enrich the understanding of patient safety in Indonesia, especially in regional hospitals that have different characteristics from national referral hospitals, as well as contribute to the development of evidence-based interventions that are appropriate to the unique conditions of regional hospitals. The novelty of this study lies in the specific context of Dr. R. Goeteng Taroenadibrata Purbalingga Hospital which recorded a relatively low patient safety incidence rate (0.16%), but systematic measurement of contributing factors has never been carried out. Based on a preliminary study conducted on March 20, 2025 through interviews with the Head of Room (KARU) and several nurses, it is known that all nurses have participated in patient safety socialization. Dr. R. Goeteng Taroenadibrata Purbalingga Hospital is a very spacious and complex hospital, although patient safety efforts have been implemented, there are still 10 patient safety incidents that occurred in several class III treatment rooms. This incident data refers to the number of patients treated in the 2023–2024 period, namely 630 patients in the Kenanga room, 1,890 patients in the Lavender room, and 1,200 patients in the Flamboyant room. In the Kenanga room, there were 3 incidents of non-injury (KTC) due to medication administration errors and 2 drug dose errors from a total of 63 patients, with an incident percentage of around 0.79%. In the Lavender room, there were 3 unexpected events (KTD) in the form of patients falling and 1 patient trapped in the elevator when transferred to the ICU out

of a total of 1,890 patients, so the incidence percentage was around 0.21%. In the Flamboyan room, 1 incident of near injury (KNC) was found due to an error reading of thorax X-ray results, with a total of 1,200 patients, resulting in an incident percentage of around 0.08%. In this study, the author focuses on the implementation of patient safety in the class III inpatient room of dr. R. Goeteng Taroenadibrata Purbalingga Hospital.

The Patient Safety Committee (KKP) said that so far the measurement of nurses' knowledge and motivation has never been carried out in a structured manner, such as through *pre-tests* and *post-tests*, while efforts are still limited to socialization and oral education. KKP data recorded that during 2024 there were 27 patient safety incidents from all treatment rooms. When compared to the total number of hospitalized patients of 16,896 patients, the incidence percentage is around 0.16%. The KKP said that this figure was lower than the actual condition because there was still low reporting of patient safety incidents. The absence of measurable data on knowledge and motivation raises the question of whether patient safety incidents that occur are influenced by the limited knowledge of nurses or by low motivation in implementing *patient safety procedures* consistently (KKP of Goeteng Taroenadibrata Hospital, 2025).

The patient safety incidents found at dr. R. Goeteng Taroenadibrata Purbalingga Hospital, such as medication administration errors in the Kenanga room, patients falling in the Lavender room, and misreading of thorax X-ray results in the Flamboyan room, show that the knowledge and motivation factors of nurses play a very important role in the implementation of *patient safety*. Medication administration errors and misreadings of thorax X-ray results indicate a lack of knowledge or lack of thoroughness of nurses on SOPs. While the incidence of patients falling can occur not only due to environmental factors, but also due to the low motivation of nurses in implementing fall prevention procedures consistently, especially in the Lavender room which has a high BOR (115.72%) so the workload is high. This strengthens the reason that knowledge and motivation need to be researched as important variables that affect the implementation of *patient safety* at Goeteng Taroenadibrata Purbalingga Hospital (KKP of Goeteng Taroenadibrata Hospital, 2025). Based on the description above, knowledge and motivation play an important role in the implementation of *patient safety*, therefore the author is interested in conducting a research with the title "The relationship between nurses' knowledge and motivation and the implementation of *patient safety*".

Method

This study uses a quantitative approach with a correlational descriptive design and *a cross-sectional design*. This design was chosen to identify the relationship between nurse knowledge and motivation and the implementation of *patient safety* at one time of measurement. However, *cross-sectional* design has limitations in explaining the cause-and-effect relationship definitively, so the results of this study can only be interpreted as a correlational relationship. The research was carried out at dr. R. Goeteng Taroenadibrata Purbalingga Hospital on September 13-20, 2025. The selection of the period is based on considerations of the stability of the number of patients and the relatively normal workload of nurses, so it is expected to represent the conditions for implementing patient safety objectively without a certain spike in workload. The population in this study is all nurses working in the Kenanga, Lavender, and Flamboyan inpatient units with a total of 38 people. The sampling technique uses *total sampling*, so that the entire population is used as a research sample. The relatively small number of samples is due to the limited number of nurses available in the unit. Although the entire population was represented, the results of this study had limitations in generalizing to all nurses in hospitals, given the presence of other units with different characteristics of workloads and types of services. The independent variable in this study is the knowledge and motivation of nurses, while the dependent variable is the implementation of *patient safety*. Data collection was carried out using a structured questionnaire that has been tested for validity and reliability. The knowledge instrument consists of 20 statements with a Guttman scale adopted from previous studies with a reliability value of 0.883. The motivation instrument consisted of 12 statements with a Likert scale adopted from previous studies with a reliability value of 0.848, while the patient safety implementation instrument consisted of 20 statements with a Likert scale with a reliability value of 0.916. Before use, the instrument is adapted to the context of services in hospitals and similar inpatient units. The questionnaire was filled out independently by respondents under the supervision of the researcher to minimize filling errors, although the potential for *social desirability bias* remains a limitation of this study.

Data analysis was carried out univariate to describe the frequency distribution of each variable and bivariously using *the Chi-Square* test with a significance level of *p-value* < 0.05. Before the *Chi-Square* test, the assumption of the number of frequencies in each cell was

checked, with a minimum frequency of ≥5. If these assumptions are not met, an alternative Fisher*'s Exact Test* is used. In addition, this study recognizes the potential for unmeasured confounding variables, such as work experience, workload, patient safety training, and managerial support, which can affect the implementation of *patient safety*. Therefore, further research is recommended using longitudinal or experimental designs with larger sample numbers and considering such external factors to obtain more comprehensive results.

Research Results

Table 1. Characteristics of Respondents Based on Age, Gender, Education Level, and Length of Work in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital.

Features	F	%
Age		
25 – 30 years old	7	18.4
31 – 35 years old	7	18.4
> 36 years old	24	63.2
Quantity	38	100
Gender		
Women	25	65.8
Male	13	34.2
Quantity	38	100
Education Level		
Diploma III (DIII)	24	63.2
Bachelor (S1)	1	2.6
Ners	13	34.2
Quantity	38	100
Length of Work		
< 5 years	9	23.7
> 5 years	29	76.3
Quantity	38	100

Referring to table 1, it was revealed that a total of 38 participants, the majority were > 36 years old as many as 24 participants (63.2%), and 25 participants were female (65.8%), 24 respondents were educated in Diploma III (63.2%), and 29 respondents (76.3%) had worked for more than 5 years.

Table 2. Distribution of Frequency of Knowledge, Nurse Motivation, and Implementation *of Patient Safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital.

Knowledge Level	F	%
Less good	7	18.4
Good	31	81.6
Quantity	38	100
Nurse Motivation	F	%
Low	13	34.2

Height	25	65.8
Quantity	38	100
Pelaksanaan *patient safety*	F	%
Less good	13	34.2
Good	25	65.8
Quantity	38	100

Referring to table 2, it shows that the participants showed an adequate degree of understanding of patient safety, which amounted to 31 participants (81.6%), while 7 participants (18.4%) still showed a poor level of understanding. Most of the respondents had high motivation in the implementation of *patient safety*, namely 25 respondents (65.8%), while 13 respondents (34.2%) had low motivation. The results of the implementation *of patient safety* showed that 25 respondents (65.8%) had implemented *patient safety* well, but 13 respondents (34.2%) still implemented it poorly.

Table 3. The Relationship of Knowledge with the Implementation *of Patient Safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital.

Knowledge Nurse	Implementation *Patient safety*				Total		*p-value*	PR (95% CI)
	Not Good		Good					
	f	%	f	%	f	%		
Less good	6	85.7	1	14.3	7	100	0.004	3.796 (1.850-
Good	7	22.6	24	77.4	31	100		7.787)
Quantity	13		25		38			

Referring to table 3, it was seen that 24 participants (77.4%) who had superior understanding implemented patient safety procedures optimally, but 6 respondents (85.7%) with low knowledge implemented them inadequately. The acquisition of a p value of 0.004 ($p < 0.05$) through statistical analysis using the Chi-square test indicates a significant relationship between the level of understanding of nursing staff and the implementation of patient safety procedures.

Table 4. The Relationship between Nurse Motivation and the Implementation *of Patient Safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital.

Motivation Nurse	Implementation *Patient safety*				Total		*p-value*	PR (95% CI)
	Not Good		Good					
	f	%	f	%	f	%		
Low	9	69.2	4	30.8	13	100	0.003	4.327 (1.643-
Height	4	16.0	21	84.0	25	100		11.397)
Quantity	13		25		38			

Based on table 4 it is shown that 21 respondents (84.0%) with high motivation showed good implementation of patient safety measures, while 9 respondents (69.2%) with low

motivation showed poor implementation. Through the value p = 0.003 (p < 0.05), statistical analysis using *the Chi-square* test showed a significant correlation between nurse motivation and patient safety implementation.

Discussion

Characteristics of *Respondents* based on age, gender, education level, and length of employment

The findings of the study revealed that most of the participants were in the age range of over 36 years old (63.2%), female (65.8%), educated in Diploma III (63.2%), and had worked for more than 5 years (76.3%). This condition is in line with the idea of Notoatmodjo (2012) who stated that cognitive ability and maturity increase with age. However, keep in mind that the ability to acquire or retain knowledge can decline with age. The majority of respondents were female in line with the research Miati & Fadilla, (2024) which found that 67.7% of female nurses carried out patient safety practices well. Traits such as meticulousness and more prominent communication skills in female nurses can serve as supporting factors in creating a safer hospital atmosphere.

The dominant level of Diploma III education is in line with the findings of the study Rochman et al., (2025) which found 42.2% of respondents with a Diploma education. Based on the opinion of Notoatmodjo (2012), the level of education affects a person's ability to understand and receive information or knowledge obtained. This study found that the combination of productive age (>36 years) with work experience >5 years made a positive contribution to the understanding and implementation of *patient safety* in the inpatient room. The dominance of female nurses with their thoroughness and good communication skills supports the creation of a stronger patient safety culture in the inpatient room. These findings reinforce the theory of Notoatmodjo (2012) that maturity of age and work experience improve cognitive and practical abilities in nursing services, although at a certain age memory ability can decline with age.

Nurses' Knowledge in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital

The results showed that as many as 31 respondents (81.6%) had good knowledge about patient safety, while 7 respondents (18.4%) were still poorly knowledgeable. These findings are in line with research Nugroho (2022) which found that the level of knowledge had a significant effect on preventive health behaviors, where students with good knowledge of Covid-19 showed

self efficacy high in the decision to vaccinate. This suggests that a good knowledge of a health topic will increase an individual's confidence and ability to carry out preventive measures more consistently.

Research Nugroho & Setiyo Adi (2022) Reinforcing these findings by showing that knowledge has a significant relationship with adherence to health protocols, confirming that knowledge is an important foundation in the implementation of quality health practices. Research results Munir et al., (2022) adding that education that improves knowledge has an impact on changing health attitudes and behaviors, showing the importance of continuous educational interventions to improve the knowledge of health workers. However, these findings differ from studies Yusiyanto et al., (2025) who reported a higher level of good knowledge at 96.7%, while the study Baihaqi & Etlidawati (2020) found only 51.2% of good knowledge with a higher proportion of sufficient and less categories. This difference shows that there is a variation in the level of knowledge of nurses between institutions which is influenced by training programs, learning culture, and frequency of socialization *patient safety*, and human resource development policies of each hospital.

Although the majority of nurses at Goeteng Taroenadibrata Purbalingga Hospital have good knowledge (81.6%), there are still 18.4% with poor knowledge who need special attention through structured and continuous training programs. This gap indicates the need for more intensive educational interventions, especially for nurses with shorter working hours or who have never attended formal *patient safety* training. This study confirms that the level of good knowledge is influenced by a combination of productive age, >5 years of work experience that provides contextual learning, and good learning ability to absorb information from various sources such as training, case discussion, and independent learning. This is in accordance with the opinion of Notoatmodjo (2012) that education, experience, and access to information are the main factors in shaping knowledge in the context of professional nursing services.

Motivation of Nurses in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital

The results showed that as many as 25 respondents (65.8%) had high motivation, while 13 respondents (34.2%) had low motivation. These findings have a conceptual relevance to the research Nugroho et al., (2021) who studies *self efficacy* (self-confidence which is an important

component of intrinsic motivation) towards preventive health behaviors, where high intrinsic motivation has been shown to influence decisions to take health actions consistently and sustainably. The research shows that psychological aspects such as self-confidence, self-confidence, and internal motivation play an important role in encouraging positive and proactive health behaviors.

These findings show a difference in proportion to the study Junus et al., (2023) who reported 68.3% of nurses were highly motivated, research Handayani et al., (2024) found a higher proportion of 77.8%, and the research Ambali et al., (2023) at Elim Rantepao Hospital, which showed 90% positive motivation, much higher than in this study. The difference in the proportion of high motivation between studies indicates the existence of different contextual factors in each institution, such as reward and incentive systems, managerial support from the head of the room and directors, varied workloads, hospital organizational culture, and nurse career development policies.

The finding of high motivation of 65.8% at Goeteng Taroenadibrata Purbalingga Hospital is lower than several previous studies, indicating the existence of external factors that affect such as high workload, especially in the Lavender room with a BOR of 115.72%, an award system that is not optimal and has not been well structured, and managerial support that still needs to be improved through regular supervision and providing positive feedback. The proportion of low motivation (34.2%) which is quite significant indicates the need for systematic intervention from hospital management to increase nurse motivation both intrinsically and extrinsically. The study identified that although intrinsic motivations such as professional awareness and commitment to patient safety are quite good, extrinsic motivation still requires reinforcement through a fair and transparent reward system, more structured recognition of performance, improved well-being of nurses through adequate incentives, and the creation of a conducive work environment with adequate facility support. This is in accordance with Maslow's (1954) hierarchy theory of needs which emphasizes the importance of meeting basic needs such as financial security, a safe work environment, social needs to be appreciated, and opportunities for self-actualization to increase sustainable work motivation.

Implementation of *patient safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital

The results showed that as many as 25 respondents (65.8%) carried out *patient safety* well, but 13 respondents (34.2%) still did it poorly. These findings differ from studies Baihaqi & Etlidawati, (2020) that reports the execution *patient safety* well reached 97.6% in the well-informed group, much higher than this study. Research Amalia et al., (2021) found a similar phenomenon where although 78.12% of nurses were well-informed and 81.25% were highly motivated, only 68.8% applied *patient safety* well, showing the gap between knowledge and motivation and actual implementation in the field.

The difference in the proportion of good implementation between studies shows that in addition to individual factors such as knowledge and motivation, organizational and system factors also have a significant effect on the implementation of *patient safety* in daily nursing practice. Although the majority of nurses at Goeteng Taroenadibrata Purbalingga Hospital carry out *patient safety* well (65.8%), the proportion of poor implementation (34.2%) is quite significant and requires serious attention from hospital management to improve the system and improve service quality. The gap between good knowledge (81.6%) and good implementation (65.8%) indicates that there are implementation barriers that come not only from individual nurse factors, but also organizational factors such as high workload that causes nurses to be less focused on implementing safety protocols, limited infrastructure to support safety protocols such as limited patient identification tools, lack of routine supervision and monitoring from the head of the room The implementation of *patient safety*, as well as a safety culture that is not optimal at the organizational level, is reflected in the lack of regular discussions about safety incidents. These findings are in line with Safira & Imanuddin (2023) which confirms that hospital structural factors such as excessive workload and ineffective supervision systems have a significant effect on implementation *patient safety* In daily nursing practice, it can even cause work stress which has an impact on the decrease in the quality of nursing services.

The Relationship between Nurse Knowledge and the Implementation *of Patient Safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital

The results of the study show that there is a significant relationship between knowledge and implementation *patient safety* $p = 0.004$, where poorly informed nurses have a 3.796 times

higher risk of carrying out *patient safety* less good than a well-informed nurse. These findings are in line with research Nugroho et al., (2021) which found a significant relationship between knowledge level and health preventive behaviors, showing that good knowledge improves an individual's ability to consistently implement health protocols even under challenging conditions.

These results are also in line with research Baihaqi & Etlidawati (2020) with $p = 0.000$ and Muslimin et al., (2023) with $p = 0.004$ which both found a significant relationship between knowledge and implementation *patient safety* in various hospital contexts. However, these findings are different from the research of Azizah & Andayanie (2020) which found no significant association ($p = 0.181$), where most nurses continue to carry out *patient safety* Although his knowledge is only a sufficient category. These differences in results show the influence of different contextual and organizational factors between institutions, where a strong organizational culture with a strict supervision system and clear standardization of procedures can compensate for the limitations of individual knowledge through effective monitoring and reminder mechanisms. This study confirms that knowledge is a strong predictor of the implementation of *patient safety* at Goeteng Taroenadibrata Purbalingga Hospital, where out of 31 well-informed respondents, 24 respondents (77.4%) implemented *patient safety* well, while out of 7 poor-informed respondents, 6 respondents (85.7%) implemented it poorly. These findings reinforce the theory of Notoatmodjo (2012) that knowledge is the basis for the formation of attitudes and behaviors, where nurses with a good understanding of patient safety concepts, principles, and procedures such as patient identification, effective communication, and fall risk prevention are better able to identify potential risks and implement prevention protocols consistently in daily practice.

In *context Swiss Cheese Model* from Reason (1990) Knowledge serves as the main layer of defense that closes the "hole" of potential errors in the system and prevents incidents from reaching the patient, where each layer of defense has weaknesses (holes) but the combination of several strong layers can prevent incidents from occurring. Although a significant relationship was proven, there were still 7 respondents (22.6%) with good knowledge but poor implementation, indicating implementation obstacles such as high workload that causes physical and mental fatigue, limited time in busy shifts with non-ideal nurse-patient ratios, lack

of direct supervision and monitoring from the head of space, or organizational systems that are not optimal in supporting the application of knowledge into real practice through adequate facilities and support.

The Relationship between Nurse Motivation and the Implementation *of Patient Safety* in the Inpatient Room of Goeteng Taroenadibrata Purbalingga Hospital

The results of the study showed that there was a significant relationship between motivation and implementation *patient safety* (p = 0.003), where nurses with low motivation had a 4.327 times higher risk of carrying out *patient safety* less good than nurses with high motivation. These findings have conceptual similarities to the research Nugroho et al., (2021) who found that self *efficacy* (self-confidence as an integral part of intrinsic motivation) influences preventive health behaviors, where individuals with high motivation and self-confidence tend to be more consistent in implementing preventive measures even in challenging or stressful conditions. The research shows that internal psychological aspects such as self-belief and motivation play an important role in encouraging positive and sustainable health behaviors without the need for strict external supervision.

These results are in line with research Junus et al., (2023) with p = 0.002 who found a significant relationship between motivation and execution *patient safety* in various hospital settings. International research by Wake et al., (2021) in Ethiopia found that 62.5% of highly motivated nurses carried out *patient safety* well, while Biresawa, (2020) reported 70.2%, a slightly higher proportion than this study which found 84.0% of highly motivated nurses carried out *patient safety* well.

The consistency of these findings across cultures and different geographic contexts confirms the universality of motivation's role in patient safety behaviors, suggesting that motivation is a fundamental factor that transcends organizational and health system cultural differences. This study found that motivation is a stronger factor than knowledge in the implementation of *patient safety* at Goeteng Taroenadibrata Purbalingga Hospital (motivational PR = 4,327 and knowledge PR = 3,796), where out of 25 highly motivated respondents, 21 respondents (84.0%) carried out *patient safety* Good, while out of 13 respondents were low motivated, 9 respondents (69.2%) did it poorly. These findings confirm that internal motivation (intrinsic motivation such as professional awareness and commitment to patient safety) and

external motivation (extrinsic motivation such as reward and recognition systems) play a more crucial role than knowledge alone in the consistency of daily safety protocol implementation, especially under conditions of high workload or time pressure. According to Maslow's (1954) theory of hierarchy of needs, the fulfillment of basic needs of nurses such as a decent salary and according to the workload, a safe and comfortable work environment, recognition from superiors and colleagues for positive contributions, and emotional support in dealing with difficult situations are the foundation of intrinsic motivation that encourages *patient safety* behaviorconsistently even in conditions of high workloads or emergency situations that require full concentration.

Notoatmodjo (2011) added that motivation is the main driver of work behavior that arises from basic needs, the desire to develop, and individual goals in achieving job satisfaction and self-actualization. However, the relatively high proportion of motivation (34.2%) in this study indicates the need for systemic improvements in a more transparent and fair reward system, more intensive managerial support through open communication and mentoring, more structured recognition of performance through awards or certificates of appreciation, improvement of nurses' well-being through adequate incentives and in accordance with the workload, and the creation of a stronger safety culture in the workplace. Organization-level through top management commitments, policies that support incident reporting without blame, and continuous learning from each incident to support nurses' extrinsic motivation in implementing *patient safety* optimally and sustainably.

Conclusion

Referring to the results of the study, it was concluded that the majority of participants were in the age range of >36 years (24 respondents, 63.2%), female (25 respondents, 65.8%), educated in Diploma III (24 respondents, 63.2%), and had worked for more than 5 years (29 respondents, 76.3%). The level of knowledge of nursing staff was rated well by 31 respondents (81.6%). The motivation of nursing staff was rated high by 25 respondents (65.8%). The implementation of patient safety measures was rated well by 25 respondents (65.8%). There was a significant correlation between nursing staff knowledge and the implementation of patient safety measures, with a value of $p = 0.004$ ($p < 0.05$). There was a significant correlation

between the motivation of nursing staff and the implementation of patient safety, with a value of p = 0.003 (p < 0.05). This condition shows the relationship between the understanding and motivation of nursing staff and the implementation of patient safety in the inpatient care unit of Dr. R. Goeteng Taroenadibrata Purbalingga Hospital.

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