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The Influence Of Clinical Leadership And Self-Efficacy On Patient Safety Culture With Work Engagement As An Intervening Variable In Inpatient Nurses At X Hospital

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ABSTRACT : *This research is based on observation results which inform that there will be an increase in patient safety incidents in 2023 compared to 2022. The aim of this research is to empirically reveal the influence of clinical leadership and self-efficacy on patient safety culture with work engagement as an intervening variable. This type of research is quantitative with a cross sectional study design. The population used was 110 inpatient nurses. The sample calculation used the Slovin formula for an error rate of 5%, resulting in a sample size of 86 respondents. The data collection technique uses a questionnaire, and the analysis method uses three box method analysis and PLS-SEM with the help of the Smart-PLS program. The results of the analysis prove that clinical leadership and self-efficacy influence patient safety culture with work engagement as an intervening variable. Clinical leadership and self-efficacy have an influence on work engagement, clinical leadership, self-efficacy and work engagement have an influence on patient safety culture, and clinical leadership is the dominant variable capable of improving patient safety culture.*

Keywords: *Clinical leadership, self-efficacy, work engagement, patient safety culture, inpatient care*

1. INTRODUCTION

X Hospital is one of the type C private hospitals located in North Jakarta, is one of the hospitals that runs inpatient nursing services, not free from errors in handling patients, informed on March 11, 2024 by the nursing quality department, that in the period 2022 - 2023 there were several patient safety incidents that showed an increase with details in 2022 KNC occurred as many as 12 cases, KTC 18 cases, KTD 6 cases and KPC 0 cases. While in 2023 KNC occurred 15 cases, KTC 21 cases, KTD 17 cases, and KPC 3 cases. With the increase in incident cases in patients in 2022-2023, this shows a low patient safety culture in inpatient services.

Referring to information about patient safety incidents, and other information that has been informed, a preliminary survey was conducted on 10 inpatient nurses on March 18, 2024 with reference to the dimensions of communication about errors, openness of communication, exchange of information, management support, continuous improvement, reporting culture, response to errors, speed of work, leadership support, teamwork, with the following conclusions; There are 6 out of 10 nurses (60%) who have problems with the aspect of communication about errors, where nurses feel they have never been informed about the errors that have occurred, and in their work units there has never been a discussion to prevent the recurrence of errors. There are 7 out of 10 nurses (70%) who have problems with the aspect of openness of communication, where none of them dare to speak up if they see something that has a negative impact on patient care, and none of them dare to speak up when they see

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someone who has more authority doing something that is unsafe for the patient. There are 6 out of 10 nurses (60%) who have problems with the aspect of information exchange, where they do not care to exchange all important patient care information, and do not care to discuss it when changing work shifts.

There are 6 out of 10 nurses (60%) who have problems with the aspect of managing services, where the head of the room does not apply the principle of patient safety in distributing nursing tasks, and does not form an experienced nursing team in completing nursing tasks. There are 7 out of 10 nurses (70%) who have problems with the aspect of improving services, where they feel that the head of the room is not a predecessor in ensuring the readiness of patient logistics in detail, and is less concerned in monitoring each activity carried out by nurses individually. There are 6 out of 10 nurses (60%) who have problems with the aspect of setting direction, where they feel that the head of the room is less concerned in directing nurses to make patient safety culture a working principle, and is less concerned in directing nurses to establish effective interprofessional communication. There are 7 out of 10 nurses who have problems with the aspect of forming a vision, where they feel that the head of the room is less concerned in setting targets for the realization of quality services, and is less concerned in making patient safety a priority. There are 7 out of 10 nurses (70%) who have problems with the aspect of conveying strategies, where nurses feel that the head of the room is less concerned in prioritizing a culture of openness and a culture of reporting.

Regarding the increasing and recurring number of patient safety incidents in 2023, and information about some nurses who still do not understand the function of incident reporting and some still do not understand that the mistakes they make are incidents that endanger patient safety, describing their self-efficacy problems about the importance of reporting patient safety incidents for management improvement materials, for this reason a preliminary survey was conducted regarding the level, generalization and strength aspects of the subjects and at the same time, with the following conclusions; There are 7 out of 10 nurses (70%) who have problems with the level aspect, where they are constrained to deliver safe services to patients, prioritize patient interests in nursing services, and are constrained to avoid patient safety incidents. There are 6 out of 10 nurses (60%) who have problems with the strength aspect, where they are constrained in mastering the principles of correct drug administration, mastering correct blood management, and mastering the principles of patient safety culture in nursing. There are 6 out of 10 nurses (60%) who have problems with the generalization aspect, where they are constrained in carrying out actions to prevent injury to patients in limited conditions,

working together with interprofessional in serving patients, and documenting patient conditions carefully.

Referring to the issue of nurses' concern to be honest in reporting patient safety incidents and nurses' concern to provide detailed information related to patient development or problems faced by patients to substitute nurses, it illustrates their low work commitment to support quality nursing services, for that a preliminary survey was conducted regarding the spirit, dedication and appreciation of nurses, to the subject and at the same time, with the following conclusions; There are 7 out of 10 nurses (70%) who have problems with the spirit aspect, where nurses are less enthusiastic about implementing ethical principles in nursing and less enthusiastic about implementing the principles of infection control and prevention in nursing services. There are 7 out of 10 nurses (70%) who have problems with the dedication aspect, where they are less than optimal in terms of accuracy in documenting patient conditions, and less than optimal in taking actions to prevent injury to patients. There are 7 out of 10 nurses (70%) who have problems with the appreciation aspect, where they are less focused on measuring vital signs when performing nursing services, and less focused when providing care to prevent patient injury.

Based on the increase in the number of patient safety incidents that occurred in inpatient installations in the 2023 period as informed by the head of the nursing service quality section, it indicates a problem for nurses with their consistency in making patient safety culture a system that prevents errors in nursing services, and the results of a preliminary survey which proves that patient safety culture is influenced by clinical leadership (Murray & Cope, 2021), self-efficacy (De Miguel et al., 2023), and work engagement (Scott et al., 2022), it is an early prediction that there is an indication that these variables influence patient safety culture, so further research is needed to prove the influence of clinical leadership, self-efficacy, and work engagement on patient safety culture. Based on the descriptions presented in previous studies, it can be seen that several relevant studies have been conducted and concluded different results, but none have combined the variables of clinical leadership, self-efficacy, and work engagement that can influence patient safety culture in one complete study, so that by combining these variables in one complete study, it becomes an idea to conduct empirical research by determining the title "The Influence of Clinical Leadership and Self-Efficacy on Patient Safety Culture with Work Engagement as an Intervening Variable in Inpatient Nurses at X Hospital".

Theoretical Framework

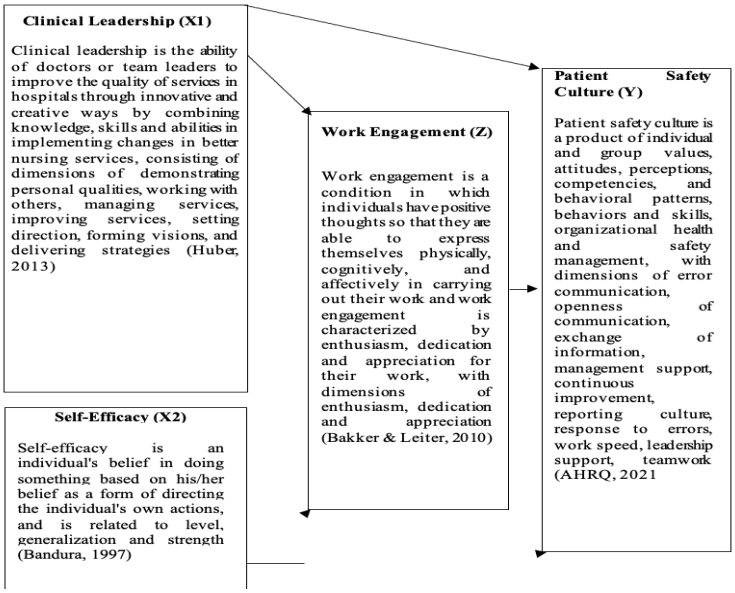

Figure 2.1 Theoretical Framework

Conceptual Framework

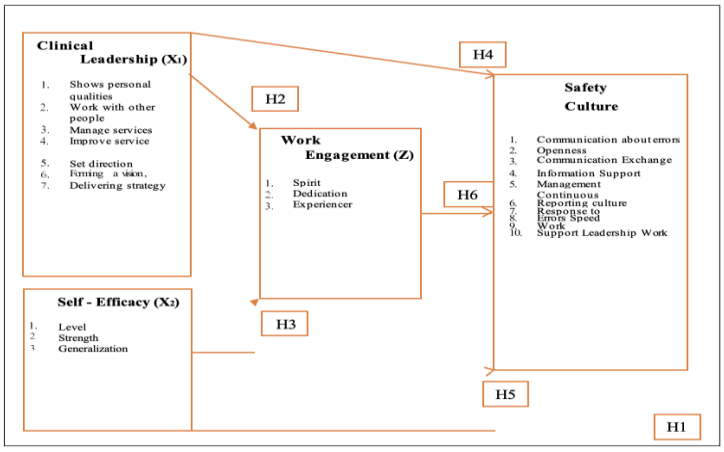

Figure 2.2 Conceptual Framework

Research Hypothesis

H1: Clinical leadership and self-efficacy have an effect on patient safety culture with work engagement as an intervening variable in nurses in the inpatient installation of X Hospital.

H2: Clinical leadership has an effect on work engagement of nurses in the inpatient installation of X Hospital.

H3: Self-efficacy has an effect on work engagement of nurses in the inpatient installation of X Hospital.

H4: Clinical leadership has an effect on patient safety culture in the inpatient installation of X

Hospital.

H5: Self-efficacy has an effect on patient safety culture in the inpatient installation of X Hospital.

H6: Work engagement has an effect on patient safety culture in the inpatient installation of X Hospital.

2. METHODOLOGY

This type of research is included in quantitative research with a cross-sectional study design that functions to describe the relationship between risk-causing variables and the resulting effects. In this study, there are 2 independent variables, namely clinical leadership (X1) and self-efficacy (X2) which will be measured for their influence on the dependent variable, namely patient safety culture (Y) and also the existence of an intervening variable, namely work engagement (Z).

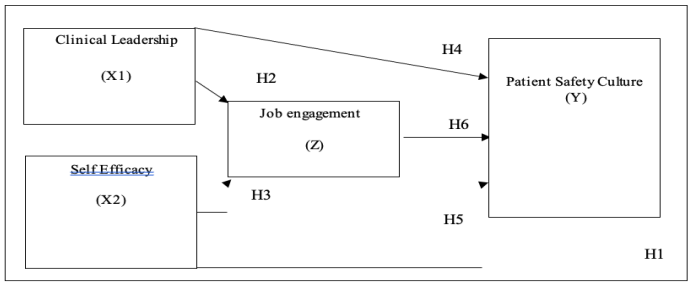

Figure 3.1 Research Constellation

Table 3.6

Three Box Method Quality Interval

Index	Category	Code
21,5 – 43	Low	R
43,1 – 64,5	Medium	S
64,6 – 86	High	T

Statistical Hypothesis

H1: $\rho \neq 0$ means that there is a significant influence of clinical leadership (X1) and self-efficacy (X2) on patient safety culture (Y) with work engagement (Z) as an intervening variable.

H2: $\rho \neq 0$ means that there is a significant influence of clinical leadership (X1) on work engagement (Z).

H3: $\rho \neq 0$ means that there is a significant influence of self-efficacy (X2) on work engagement (Z).

H4: $\rho \neq 0$ means that there is a significant influence of clinical leadership (X1) on patient safety

culture (Y).

H5: ρ ≠ 0 means that there is a significant influence of self-efficacy (X2) on patient safety culture (Y).

H6: ρ ≠ 0 means that there is a significant influence of work engagement (Z) on patient safety culture (Y).

3. RESEARCH RESULTS AND DISCUSSION

Research Results

Data Quality Test

Validity Test

Table 4.2

Results of Validity Test of Clinical Leadership Instrument

No	rcount	rtable	Information
P1	.785**	0,361	Valid
P2	.878**	0,361	Valid
P3	.808**	0,361	Valid
P4	.757**	0,361	Valid
P5	.775**	0,361	Valid
P6	.718**	0,361	Valid
P7	.730**	0,361	Valid
P8	.822**	0,361	Valid
P9	.819**	0,361	Valid
P10	.883**	0,361	Valid
P11	.802**	0,361	Valid
P12	.762**	0,361	Valid
P13	.366*	0,361	Valid
P14	.789**	0,361	Valid

Source: SPSS Processing, 2024

From the table, it can be seen that all statements have a calculated r value > r table (0.361), so it is concluded that in the clinical leadership survey, 14 statement items were used, because all of them were declared valid.

Table 4.3

Self-Efficacy Instrument Validity Test Results

No	rcount	rtable	Information
P1	.797**	0,361	Valid
P2	.940**	0,361	Valid
P3	.847**	0,361	Valid
P4	.888**	0,361	Valid
P5	.800**	0,361	Valid
P6	.909**	0,361	Valid
P7	.891**	0,361	Valid
P8	.886**	0,361	Valid
P9	.823**	0,361	Valid

Source: SPSS 2024 Processing

From the table, it can be seen that all statements have a calculated r value > r table

(0.361), so it is concluded that in the self-efficacy survey, 9 statement items were used, because all of them were declared valid.

Table 4.4

Results of Validity Test of Work Engagement Instrument

No	r_{count}	r_{table}	Information
P1	.845**	0,361	Valid
P2	.895**	0,361	Valid
P3	.967**	0,361	Valid
P4	.950**	0,361	Valid
P5	.883**	0,361	Valid
P6	.893**	0,361	Valid

Source: SPSS 2024 Processing

From the table, it can be seen that all statements have a calculated r value > r table (0.361), so it is concluded that in the work engagement survey, 6 statement items were used, because all of them were declared valid.

Table 4.5

Results of Validity Test of Patient Safety Culture Instrument

No	r_{count}	r_{table}	Information
P1	.895**	0,361	Valid
P2	.895**	0,361	Valid
P3	.865**	0,361	Valid
P4	.817**	0,361	Valid
P5	.810**	0,361	Valid
P6	.878**	0,361	Valid
P7	.875**	0,361	Valid
P8	.914**	0,361	Valid
P9	.877**	0,361	Valid
P10	.895**	0,361	Valid
P11	.762**	0,361	Valid
P12	.812**	0,361	Valid
P13	.870**	0,361	Valid
P14	.843**	0,361	Valid
P15	.774**	0,361	Valid
P16	.734**	0,361	Valid
P17	.859**	0,361	Valid
P18	.895**	0,361	Valid
P19	.895**	0,361	Valid
P20	.865**	0,361	Valid

Source: SPSS 2024 Processing

From the table, it can be seen that all statements have a calculated r value > r table (0.361), so it is concluded that the patient safety culture survey uses 20 statement items, because all of them are declared valid.

Reliability Test

Table 4.6

Summary of Reliability Test

Variable	N	Cronbach' Alpha	Information
Clinical leadership	14	0,769	Reliable
Self-efficacy	9	0,791	Reliable
Work engagement	6	0,816	Reliable
Patient safety culture	20	0,768	Reliable

Source: SPSS 2024 Processed

From the table above, it can be seen that all research variables have a Cronbach's alpha value > 0.60, so it can be concluded that the questionnaire for each research variable can be relied on in further research.

Table 4.11

Research Instrument Analysis Matrix

Variable	Index			Behavior
	R	S	T	
Clinical leadership			*	Driven
Self-efficacy			*	Reflective
Work engagement			*	Living
Patient safety culture			*	Commitment

The clinical leadership variable is at a high level, this condition indicates the behavior of nurses who are driven by the leadership pattern carried out by the head of the room so that they are motivated to make patient safety culture a principle of quality nursing services.

The self-efficacy variable is at a high level, this condition indicates the behavior of nurses who are reflective because they master the field of work that is their responsibility, thus making patient safety culture a principle of quality nursing services.

The work engagement variable is at a high level, this condition indicates the behavior of nurses who live their role to realize quality services, thus making patient safety culture a principle of quality nursing services.

The patient safety culture variable is at a high level, this condition shows the behavior of nurses who are committed to realizing quality nursing services, thus making them committed to making patient safety culture a principle of quality nursing services.

Outer Model Analysis

Construct Validity and Reliability Test

Table 4.13

Construct Validity and Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
X1	0.911	0.926	0.556
X2	0.853	0.891	0.576
Y	0.955	0.959	0.567
Z	0.925	0.941	0.729

Source: Samrt-PLS Output, 2024

Table 4.13 shows that all AVE values of the research variables are > 0.50, and the Cronbach's alpha values and composite reliability are all > 0.70, so it is concluded that all indicators contained in the research variables are good constructs in forming latent variables.

Structural Model Fit Test

Table 4.14

Results of Structural Model Fit Analysis

	Saturated Model	Estimation Model
SRMR	0.097	0.097

Source: Samrt-PLS Output, 2024

Based on table 4.14, it is concluded that the SRMR value of the saturated model and the estimation model shows a value <0.1 so that the results explain that the research model can be said to be Fit to measure the relationship between latent variables and observed variables. So it is concluded that the empirical modeling made based on observational data, in accordance with the reference in the index, or the structure shows a good model.

Multicollinearity Test

Table 4.15

Multicollinearity Test Results

Variable	Testing to Variables			
	X1	X2	Y	Z
X1			4.037	2.848
X2			3.569	2.848
Z			4.403	

Source: Samrt-PLS Output, 2024

Based on table 4.15, it is known that testing the clinical leadership and self-efficacy variables on work engagement shows that all VIF values <10, and testing the clinical leadership, self-efficacy and work engagement variables on patient safety culture shows that all VIF values <10, so it can be concluded that the independent variables are not correlated with each other, and the research can be carried out to the next stage.

Inner Model Analysis

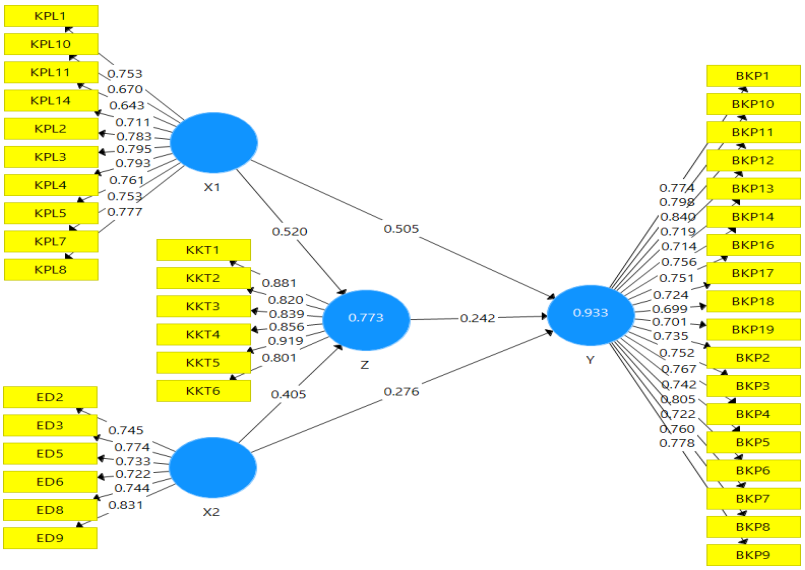

Figure 4.1

Coefficient Model Path Diagram

Source: Samrt-PLS Output, 2024

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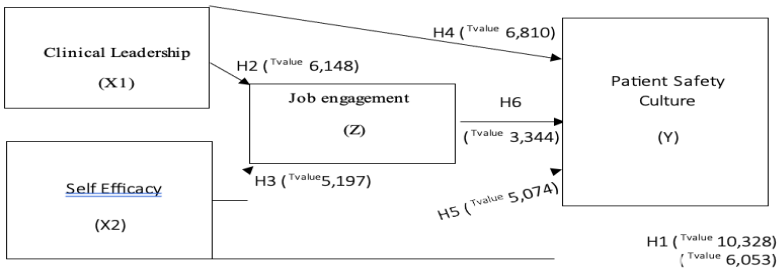

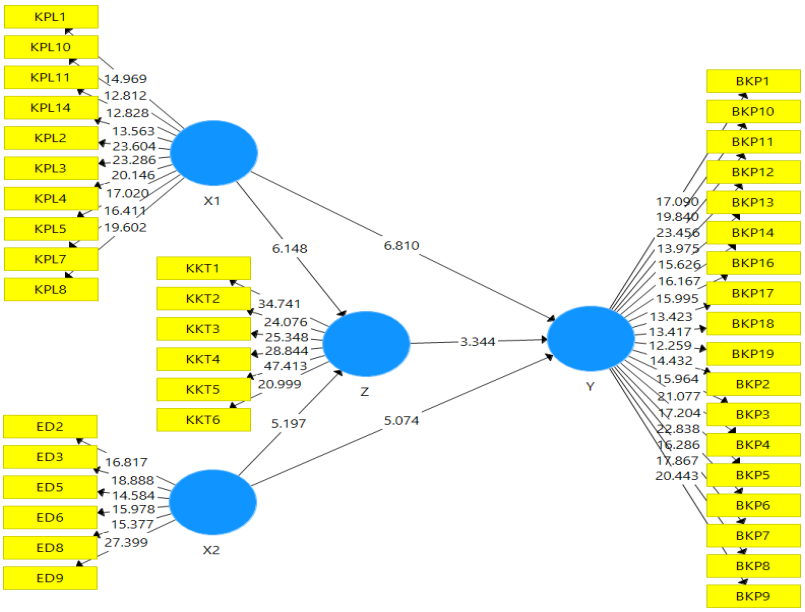

Figure 4.2

Path Diagram of Hypothesis Testing Model

Source: Samrt-PLS Output, 2024

Table 4.18 Summary of Hypothesis Testing

Total Influence	T Statistics (|O/STDEV|)	T-table	P Values	Influence	Conclusion
Clinical leadership→Work engagement→Patient safety culture	10.328	1.66	0.000	Influential	H1 Accepted
Self-efficacy→Work engagement→Patient safety culture	6.053	1.66	0.000	Influential	

Total Influence	T Statistics (|O/STDEV|)	T-table	P Values	Influence	Conclusion
Clinical leadership→Work engagement	6.148	1.66	0.000	Influential	H2 Accepted
Self-efficacy→Work engagement	5.197	1.66	0.000	Influential	H3 Accepted
Clinical leadership →Patient safety culture	6.810	1.66	0.000	Influential	H4 Accepted
Self-efficacy→Patient safety culture	5.074	1.66	0.000	Influential	H5 Accepted
Work engagement→Patient safety culture	3.344	1.66	0.001	Influential	H6 Accepted

In the influence of clinical leadership and self-efficacy on patient safety culture with work engagement as an intervening variable, it shows a TValue comparison of 10.328> 1.66 and 6.053> 1.66 and a p-value of 0.000 or less than 0.05. This states that clinical leadership and self-efficacy have a significant effect on patient safety culture with work engagement as an intervening variable, so it falls into the H1 acceptance category.

In the influence of clinical leadership on work engagement, it shows a TValue comparison of 6.148> 1.66 and a p-value of 0.000 or less than 0.05, which means that clinical leadership has a significant effect on work engagement, so it falls into the H2 acceptance category.

In the influence of self-efficacy on work engagement, it shows a TValue comparison of 5.197> 1.66 and a p-value of 0.000 or less than 0.05, which means that self-efficacy has a significant effect on work engagement, so it falls into the H3 acceptance category.

The influence of clinical leadership on patient safety culture shows a TValue comparison of 6.810> 1.66 and a p-value of 0.000 or less than 0.05, which means that clinical leadership has a significant effect on patient safety culture, so it falls into the acceptance category H4.

The influence of self-efficacy on patient safety culture shows a TValue comparison of 5.074> 1.66 and a p-value of 0.000 or less than 0.05, which means that self-efficacy has a significant effect on patient safety culture, so it falls into the acceptance category H5.

The influence of work engagement on patient safety culture shows a TValue comparison of 3.344> 1.66 and a p-value of 0.001 or less than 0.05, which means that work engagement has a significant effect on patient safety culture, so it falls into the acceptance category H6.

Discussion

The Influence of Clinical Leadership and Self-Efficacy on Patient Safety Culture with Work Engagement as an Intervening Variable

The results of the analysis prove that clinical leadership and self-efficacy have a significant effect on patient safety culture with work engagement as an intervening variable, which means that with the presence of work engagement, clinical leadership and self-efficacy can be higher in improving patient safety culture, compared to without work engagement, and this concludes that work engagement is able to positively intervene in the relationship between clinical leadership and self-efficacy on patient safety culture.

Based on theory, previous research, threebox analysis and research results, it shows that clinical leadership and self-efficacy in inpatient nurses at X Hospital affect the values of commitment to patient safety culture. The important role of clinical leadership in individually monitoring each activity carried out by nurses will provide a reflective attitude, especially in limited conditions, such as preventing patient fall-risks during unit transfers and monitoring the smoothness of blood transfusion administration. This is proven by the category index of the two variables, where these results are seen in the relationship between variables, where good clinical leadership and efficacy will increase work engagement in inpatient nurses at X Hospital. In conclusion, these three aspects increase commitment to patient safety culture.

The Influence of Clinical Leadership on Work Engagement

The results of the analysis concluded that clinical leadership has an effect on work engagement, which means that with increased clinical leadership, it will be followed by increased work engagement of nurses, where it can be seen that with the encouragement of nurses with clinical leadership carried out by the head of the room, they are more active in experiencing and participating in realizing quality services.

In improving services at X Hospital, clinical leaders in the inpatient unit often individually monitor each nurse's activity and ensure the readiness of patient logistics in sufficient detail, and organize a nursing team on one shift properly in order to be able to resolve nursing problems properly. This makes the performance of inpatient nurses focused and comfortable when providing care in inpatient care and careful in documenting patient

conditions. Judging from the results of the study, the better the clinical leadership will have an effect on increasing good work engagement.

The Influence of Self-Efficacy on Work Engagement

The results of the analysis concluded that self-efficacy has an effect on work engagement, which means that with increased self-efficacy, it will be followed by increased work engagement of nurses, where it can be seen that with the reflective work behavior displayed by nurses because they feel they have mastered their duties and responsibilities well, they are active in participating in realizing quality services.

From the results of the study, it can be seen that the efficacy of inpatient nurses at X Hospital is in the high category, indicating that they are able to do their work in the inpatient room well. Taking actions to prevent injury to patients, especially in limited conditions, being able to solve problems in a state of good self-focus and mastering the principles of nursing care well. This creates and increases appreciation in a job. So it can be concluded that the higher the self-efficacy in a nurse, the better the work engagement will be.

The Influence of Clinical Leadership on Patient Safety Culture

The results of the analysis concluded that clinical leadership has an effect on patient safety culture, which means that with increased clinical leadership, it will be followed by an increase in patient safety culture, where it can be seen that with the encouragement of nurses with clinical leadership carried out by the head of the room, nurses consistently make patient safety culture a principle of quality service.

This is in accordance with the actions and principles of clinical leadership implemented by X Hospital where a good clinical leader will make a push to make patient safety culture a form of commitment in a medical service in a hospital.

The Influence of Self-Efficacy on Patient Safety Culture

The results of the analysis concluded that self-efficacy has an effect on patient safety culture, which means that with increasing nurse self-efficacy, it will be followed by an increase in patient safety culture, where it can be seen that with the reflective behavior of nurses because they feel they have mastered the nursing field that is their responsibility, nurses consistently make patient safety culture a principle of quality service.

The research analysis shows that the attitude of efficacy of inpatient nurses at X Hospital in a job affects the value of patient safety culture. Being one of the capitals in the attitude of nurses in carrying out nursing care work. The better the self-efficacy of a nurse, the greater the commitment to improving patient safety culture.

The Influence of Work Engagement on Patient Safety Culture

The results of the analysis concluded that work engagement has an effect on patient safety culture, which means that with increasing nurse work engagement, it will be followed by an increase in patient safety culture, where it is seen that nurses live their role as providers of safe services for, so that they are committed to making patient safety culture a system or principle of quality service.

Work engagement at X Hospital is in the high category where the value of dedication spirit and good appreciation of work engagement makes patient safety culture a commitment in providing nursing care services.

Research Findings

Based on the entire series of results and discussions, it was revealed that clinical leadership and self-efficacy have an effect on patient safety culture with work engagement as an intervening variable. Clinical leadership and self-efficacy have an effect on work engagement, clinical leadership, self-efficacy and work engagement have an effect on patient safety culture, and clinical leadership is a dominant variable that can improve patient safety culture because it has a higher coefficient than self-efficacy and work engagement referring to the function of the direct influence analysis equation on the dependent variable / patient safety culture.

Research Limitations

This research is limited to using only questionnaires so that it cannot see the information in depth and only according to personal assessments from the perspective of each nurse.

4. CONCLUSION, IMPLICATIONS, AND SUGGESTIONS

Conclusion

Clinical leadership and self-efficacy influence patient safety culture with work engagement as an intervening variable. So in improving patient safety culture can be developed with good clinical leadership, increasing self-efficacy and supported by improving good work attitudes.

Clinical leadership influences work engagement. To improve work engagement can be done development in clinical leadership, so that the increasing clinical leadership will increase good attitudes and sense of work engagement.

Self-efficacy influences work engagement, to improve work engagement, the level of self-efficacy can be developed where nurses have a better sense of self-confidence in carrying out service tasks.

Clinical leadership influences patient safety culture. So that by increasing the commitment to patient safety culture, good clinical leadership development can be carried out.

Self-efficacy influences patient safety culture, so that by increasing the commitment to patient safety culture, it is necessary to increase self-efficacy in each individual nurse.

Work engagement influences patient safety culture. By increasing the patient safety culture, it is necessary to develop and improve work engagement in providing excellent service.

5. RESEARCH IMPLICATIONS

Theoretical Implications

Clinical leadership is one of the factors that can improve patient safety culture, these results support the opinion that states clinical leadership is the ability of doctors or team leaders to improve the quality of services in hospitals through innovative and creative ways by combining knowledge, skills and abilities in implementing changes in better nursing services (Huber, 2013), and clinical leadership is a driver of efforts to develop a vision of clinical services in hospitals, and the creation of a world-class clinical service vision and strategies for achieving it is a practical example of the existence of clinical leadership in hospitals (Stanley et al., 2022), and is in line with research that concludes that clinical leadership seeks to direct its members to be able to provide quality services, thus forming nurse discipline to make patient safety culture a working principle (Huang et al., 2024), and clinical leadership influences patient safety culture (Murray & Cope, 2021).

Self-efficacy is one of the factors that can improve patient safety culture, these results support the opinion that states self-efficacy is an individual's belief in doing something based on their beliefs as a form of directing the individual's own actions, and is related to level, generalization and strength (Bandura, 1997), self-efficacy is the level of individual self-confidence that is able to maximize their competence to successfully carry out certain tasks that are their responsibility (Luthans, 2008), and is in line with research that concludes that when nurses have strong self-efficacy, it shows that they are able to master the broad field of work they do, so that it becomes a measure of their level of discipline towards safety culture as a system that determines the safety of nursing services (Harsul et al., 2020), and basically the self-efficacy possessed by nurses determines their discipline towards patient safety culture (De Miguel et al., 2023).

Work engagement is one of the factors that can improve patient safety culture, these results support the opinion that states that work engagement is a condition in which individuals have positive thoughts so that they are able to express themselves both physically, cognitively,

and affectively in doing their work and work engagement is characterized by enthusiasm, dedication and appreciation for their work (Bakker & Leiter, 2010), and work engagement is a condition where employees side with their work and actively participate in it, and consider that the work is important to them (Robbins & Judge, 2017), and in line with research that concludes that work engagement is a driving force that moves nurses to realize safe nursing services for patients, so that they will be more disciplined towards patient safety culture (Janes et al., 2021), and work engagement has an effect on patient safety culture (Scott et al., 2022).

Patient safety culture is a system so that services can be delivered in a quality manner, for that it requires commitment from service providers to make the system a working principle, and this commitment can be formed through a clinical leadership pattern that will direct and supervise nurses to implement it, and with self-efficacy, making nurses understand about work professionalism, and the formation of work engagement makes nurses actively support management goals in realizing quality services. This situation supports the opinion that states that patient safety culture is a product of individual and group values, attitudes, perceptions, competencies, and behavior patterns, behavior and skills, organizational health and safety management (AHRQ, 2021).

Managerial Implications

Clinical leadership has an effect on patient safety culture, but there are still weak aspects where there is a dimension about delivering strategies which is the weakest aspect of the clinical leadership variable, so that to improve clinical leadership, improvements are needed in the nursing administration system, which aims to improve the skills and knowledge of nurses who serve as clinical leaders in managing administrative tasks in the hospital environment, especially in the inpatient room. So that the head of the room can also prioritize teamwork in nursing care, and prioritize the reporting culture.

Self-efficacy influences patient safety culture. However, there are still weak aspects where the level dimension is the weakest aspect of the self-efficacy variable, so to improve self-efficacy, it is necessary to improve the training system by providing training related to holistic nursing material, from comprehensive training and education so that nurses are able to be calm when facing emergencies, careful when providing assistance to patients, and calm when providing assistance in limited conditions.

Work engagement influences patient safety culture, but there are still weak aspects where the dedication dimension is the weakest aspect of the work engagement variable. To improve good work engagement, it is necessary to improve the training system by providing training related to how to provide safe services for patients in accordance with hospital standard

procedures, and so that nurses are careful in documenting patient conditions, and are able to take actions to prevent injury to patients.

In the aspect of patient safety culture, it was also found that there were still weak aspects where the leadership support dimension was the weakest aspect of the patient safety culture variable, so it is necessary to improve training for room heads, by providing training related to clinical leadership, so that room heads are able to consider nurses' suggestions in improving patient safety, and are able to take appropriate action to overcome patient safety problems.

6. SUGGESTIONS

For Hospitals

Reviewed in the clinical leadership variable, it is suggested that management can provide nursing management training on the application of professional nursing methods to the head of the room, so that they can establish effective professional nursing methods as standard, and always prioritize teamwork in nursing care. This training aims to improve the skills and knowledge of nurses in managing administrative tasks, some aspects included in the training are training in patient data management (EMR), training in the role of the head of the room to have the responsibility of supervising, motivating and managing the nursing team, training in risk management and patient safety, training in the use of health information technology. Reviewed in the self-efficacy variable, it is suggested that management provide opportunities in the form of career development by providing holistic nursing training, so that nurses are able to remain calm when facing emergencies, be careful when providing assistance to patients, and work together with interprofessionals in serving patients.

Reviewed in the work engagement variable, it is suggested that management can provide coaching and training in excellent service to nurses about safe and patient-focused services, so that nurses are able to take actions to prevent injury to patients.

Reviewed from the patient safety culture variable, it is suggested that management conduct socialization about patient safety goals about 6 patient safety targets to be achieved, so that nurses feel that their work units are focused on learning and do not feel blamed when mistakes occur. In addition, management can implement team-based work performance assessments that will make the head of the room seriously consider nurses' suggestions to improve patient safety, during busy times nurses will help each other and not use the principle of blaming culture, thereby improving the nursing team's reporting culture.

For future researchers

It is recommended for further research to include assessments from the perspective of users or management, so that the results of the study are not biased.

It is recommended for further research to include opinions from patients about nurses' behavior when providing nursing services, so that it can be a basis for improving nurses' work behavior to commit to a culture of patient safety.

Using Qualitative Research Methods: Further research can use qualitative research methods, such as in-depth interviews or focus groups, to gain a deeper understanding of patient safety culture, clinical leadership, self-efficacy and work engagement.

Comparative studies between hospitals: Further research can consider conducting a comparative study between X Hospital and other hospitals that have similar characteristics (eg, type of hospital, geographic location or type of services offered). This comparative study will allow researchers to compare how clinical leadership, self-efficacy and work engagement affect patient safety culture and serve as guidelines for improving quality services to patients.

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