

**THE EFFECT OF LEADERSHIP AND REWARD SYSTEM ON PATIENT SAFETY CULTURE MEDIATED BY NURSES' MOTIVATION IN SATYA NEGARA SUNTER HOSPITAL THE EFFECT OF LEADERSHIP AND REWARD SYSTEM ON PATIENT SAFETY CULTURE MEDIATED BY NURSES' MOTIVATION IN SATYA NEGARA SUNTER HOSPITAL**

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**ABSTRACT**

This study examines the impact of leadership and reward systems on patient safety culture at Satya Negara Sunter Hospital, with nurse motivation serving as a mediating factor. The need for effective patient safety practices in healthcare environments underscores the importance of leadership, rewards, and motivation. This quantitative study used a cross-sectional design and surveyed 120 nurses through a structured questionnaire. Data analysis was performed using Partial Least Squares (PLS) to assess the direct and indirect effects of the variables. The results indicate that both leadership and reward systems significantly influence patient safety culture, with nurse motivation mediating these relationships. The findings emphasize that leadership enhances nurse motivation, while a transparent reward system further boosts motivation and strengthens the patient safety culture. This study contributes to organizational behavior theory by highlighting the interconnections between leadership, reward systems, and motivation in fostering a culture of safety. Practical recommendations include strengthening leadership capabilities, optimizing reward programs, and improving nurse motivation to ensure high-quality healthcare services.

**Keywords:** Leadership, Reward System, Patient Safety Culture, Nurse Motivation

**INTRODUCTION**

Safety has become a global issue that encompasses various important aspects in hospitals, including patient safety, worker or health worker safety, building and equipment safety, environmental safety, and hospital business safety related to the survival of the hospital (Adebiyi et al., 2020; Feliciano et al., 2022; Kim et al., 2023; Ranasinghe et al., 2023; Vaughn et al., 2020). Among these aspects, patient safety is a top priority, because it is directly related to the quality of service and the image of the hospital. The patient safety movement has become a global spirit, where hospitals around the world, not only in developed countries, implement patient safety to ensure the quality of service. Effective leaders in instilling a culture of patient safety are needed to create a safe environment, support staff efforts, and avoid a punitive approach (Ataburo et al., 2017; McKnight et al., 2017; Muchiri, 2022; Naini et al., 2022).

The phenomenon that occurred at RS. Satya Negara Sunter shows that the role of basic-level leadership, such as the head of the room or head of the unit, is very important in guiding nurses to implement patient safety standards. The survey results showed that the majority of nurses (70%) felt that their leaders played a very important role in supporting the implementation of a patient safety culture. However, there is still a lack of support from leaders, with 30% of nurses expressing the need for further training and direct guidance in handling error situations. This shows that although the role of leadership is very important, there needs to be increased involvement and further communication from leaders to strengthen the patient safety culture.

The second factor that influences patient safety culture is the reward system, which consists of various organizational components that allocate compensation to employees in return for their

contributions. At RS. Satya Negara Sunter, the majority of nurses stated that the rewards received so far have focused more on remuneration or direct financial compensation. However, indirect rewards, such as formal recognition or a supportive work environment, are still felt to be less than optimal. As many as 60% of nurses felt that the compensation they received was adequate, but 40% felt that non-monetary rewards, such as certificates or plaques, and support for career development were more needed. This phenomenon reflects the importance of a more transparent and fair reward system, as well as the provision of rewards that are not only based on finances.

Regarding nurse motivation, the survey results showed a decline in work motivation among nurses at RS. Satya Negara Sunter. Based on data on bed utilization (BOR) and length of stay (LOS) of the hospital, the decline in the efficiency of bed use also reflects the low motivation of nurses in providing fast and responsive services. As many as 60% of nurses interviewed stated that their work motivation had decreased, with influencing factors including lack of discipline, communication between nurses, and lack of cooperation in patient care. In addition, nurses also felt bored and less enthusiastic about participating in training provided by the hospital. This phenomenon highlights the importance of paying attention to factors that can increase nurse motivation to improve performance and quality of service.

This study is a replication and development of previous studies conducted by Faridah et al. (2019), which showed that leadership and motivation play an important role in building a patient safety culture. However, the gap in this study lies in the objects and methods used, where previous studies focused more on the relationship between leadership and motivation without considering other factors such as the reward system. This study aims to deepen understanding by adding a reward system as an independent variable and using nurse motivation as a mediating variable to see how the relationship between leadership, reward systems, and patient safety culture can strengthen each other.

The novelty of this study is the addition of a reward system as a factor that can strengthen the relationship between leadership and patient safety culture. By using nurse motivation as a mediating variable, this study attempts to answer whether performance-based rewards can increase nurse motivation and strengthen patient safety culture at RS. Satya Negara Sunter. The urgency of this study is to provide a more comprehensive understanding of the factors that contribute to building a patient safety culture, which is very relevant considering that different nurse performances can affect the success of patient safety implementation. This study is expected to not only add academic insight, but also provide practical recommendations to improve patient safety through strengthening leadership, reward systems, and nurse motivation in hospitals.

The novelty of this research lies in the addition of the reward system as a new factor influencing patient safety culture, beyond the traditional focus on leadership and motivation. Previous studies Faridah et al. (2019) have primarily explored leadership and motivation in the context of patient safety culture, but they did not consider the reward system as a critical variable. This study introduces the reward system and investigates its mediating role through nurse motivation, creating a more comprehensive model for understanding the factors that influence patient safety culture. By doing so, it extends the research in healthcare management, offering practical insights into how rewards (both financial and non-financial) can improve motivation and strengthen patient safety culture, an essential aspect for hospital performance.

## **Research Methods**

The population in this study were all nurses working at Satya Negara Hospital, Sunter in 2022. The sample in this study was taken as a representation of the population, where the sample is part of the population whose characteristics are to be investigated. Based on the formula proposed by Hair et al. (2019), the sample size depends on the number of indicators used for all variables. This study involved 4 variables with a total of 23 indicators, so the number of samples calculated was between 115 and 230 respondents. For this study, the number of samples taken was 120 respondents, who would be given a questionnaire in November-December 2022 to nurses at Satya Negara Hospital, Sunter. The determination of this sample

size was also based on the opinion of Gay and Roscoe that a sample size of more than 30 and less than 500 respondents was sufficient for comparative research.

The data used in this study are primary data obtained from questionnaires given to nurses at Satya Negara Sunter Hospital. To analyze the data, this study used univariate and multivariate analysis with Partial Least Squares (PLS) analysis techniques to evaluate the influence of variables on nurses' clinical performance. The hypothesis was tested using the F test for simultaneous analysis and the direct/indirect effect test to determine the direct or indirect influence between the independent and dependent variables. The evaluation was carried out through construct validity testing, indicator reliability, and determination coefficient (R<sup>2</sup>) and path analysis to ensure that the proposed model is relevant and can predict the desired results.

## **RESULTS AND DISCUSSION**

### **Research result**

The characteristics of the research respondents show that the majority of nurses in this hospital are female, with a total of 107 people (89.2%), while 13 people (10.8%) are male. The majority of respondents are in the age range <25 years, which is 94 people (78.3%). While respondents aged 25-30 years were only 1 person (0.8%), aged 31-35 years were 20 people (16.7%), and those over 40 years were 5 people (4.2%). Thus, the majority of nurses at RS. Satya Negara Sunter are included in the productive age group, especially under 25 years.

The characteristics of respondents' education show that most nurses have a final education of Nursing, which is 94 people (78.3%). The last education is S1 Nursing, there are 12 people (10%), while DIII Nursing, there are 8 people (6.7%). Respondents with other education such as D3 Health Analyst, D3 Midwifery, S1 Economics, S2 Nursing, and High School, each only number 1-2 people (under 1.7%). This shows that the majority of nurses at RS. Satya Negara Sunter have an educational background in Nursing. Most respondents are also not married, with a total of 106 people (88.3%), while 14 people (11.7%) are married. Interestingly, the majority of nurses at this hospital have worked for less than 1 year, which is 85 people (70.8%), which shows that nurses at RS. Satya Negara Sunter are mostly new workers with limited work experience.

### **Validity Test Results**

For validity and reliability tests, 30 respondents were used. The trial of the instrument items was intended to test the validity and reliability of the instrument items used in the study.

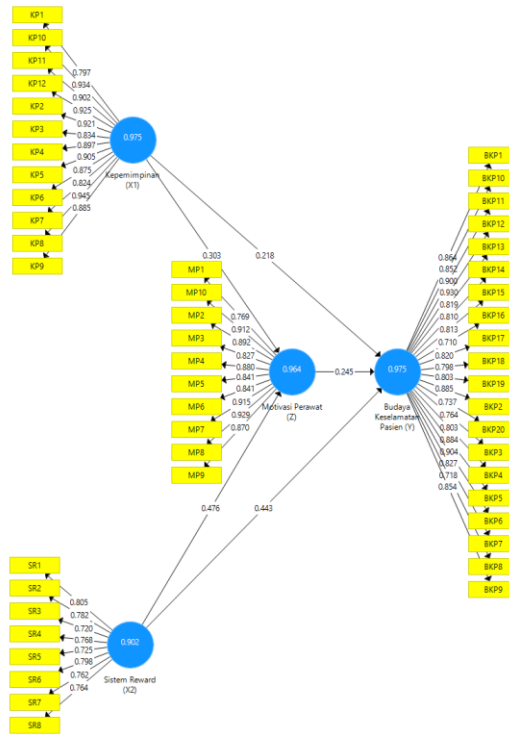
### **Reliability Test Results**

Reliability testing is useful to determine whether the instrument in this case the questionnaire can be used more than once, at least by the same respondent will produce consistent data. In other words, the reliability of the instrument characterizes the level of consistency. The reliability test used is by using the Cronbach's Alpha method using the SPSS program. The Cronbach Alpha method is used to find the reliability of an instrument whose score is a range of several values or in the form of a scale.

### **Hypothesis test**

#### ***Outer Model***

#### **Actual Validity Test**



**Image 1. Outer Model**

#### a. Discriminant Validity Test

It was found that the correlation of each item to its own variable has a greater value than the correlation of the item to other variables. Therefore, all items are categorized according to the rule of thumb of discriminant validity testing so that the data can be analyzed further.

According to the results of the outer loading test, all indicators show an outer loading value greater than 0.7, so the indicators above are said to be reliable.

#### b. Construct Validity

**Table 1. Average Variance Extracted (AVE) Test Results**

Variables	Average Variance Extracted (AVE)	Results
Leadership (X1)	0.789	Valid
Reward System (X2)	0.587	Valid
Nurse Motivation (Z)	0.755	Valid
Patient safety culture (Y)	0.684	Valid

According to the results above, it shows the AVE value above 0.5 for each variable. So it can be concluded that the indicators are considered valid to measure their respective constructs.

#### c. Construct Reliability

**Table 2. Construct Reliability test results**

	<b><i>Cronbach's Alpha</i></b>	<b><i>Composite Reliability</i></b>	<b>Results</b>
Leadership (X1)	0.975	0.978	Reliable
Reward System (X2)	0.902	0.919	Reliable
Nurse Motivation (Z)	0.964	0.968	Reliable
Patient safety culture (Y)	0.975	0.977	Reliable

Referring to the explanation, the Cronbach's Alpha value is above 0.7 and the composite reliability value is above 0.6, which is around 0.878 as the lower limit and 0.982 as the upper limit so it can be said that all indicators are reliable.

#### ***Inner Model (Structural Model)***

**Table 3. Hypothesis Test Results**

<b>Hypothesis</b>	<b><i>Standard Coefficient</i></b>	<b><i>T statistics</i></b>	<b><i>P value</i></b>	<b><i>Note</i></b>
Leadership (X1) -> Nurse Motivation (Z) -> Patient safety culture (Y)	0.074	2,096	0.037	Supported
Reward System (X2) -> Nurse Motivation (Z) -> Patient Safety Culture (Y)	0.116	2,002	0.046	Supported
Leadership (X1) -> Nurse Motivation (Z)	0.303	3,830	0,000	Supported
Reward System (X2) -> Nurse Motivation (Z)	0.476	6,027	0,000	Supported
Leadership (X1) -> Patient safety culture (Y)	0.218	2,328	0.020	Supported
Reward System (X2) -> Patient safety culture (Y)	0.443	4,506	0,000	Supported
Nurse Motivation (Z) -> Patient safety culture (Y)	0.245	2,441	0.015	Supported

### **Research Results Summary**

#### **The Influence of Leadership on Nurse Motivation**

This study shows that leadership has a significant effect on nurse motivation. Effective leaders are able to provide clear direction and support to nurses, which in turn increases their enthusiasm and commitment to their work. This is in accordance with the views of Burns and Yukl who stated that transformational leadership and leader influence play an important role in increasing employee motivation. Robbins & Judge also emphasized that leadership style contributes to the formation of motivation through effective communication. Research by Hartono et al. (2020) supports this finding by showing that effective leadership increases nurse work motivation. This finding confirms that good leadership quality can create high work motivation among nurses, which is also in line with the theory of transformational leadership which emphasizes positive influence to achieve better results (Johnson, 2023a, 2023b; Vanek, 2007).

### **The Influence of Reward Systems on Nurse Motivation**

The results of this study indicate that the reward system has a significant influence on nurse motivation. Fair rewards, both financial and non-financial, can increase nurse motivation to work better and provide the best service. Lawler explained that rewards function as positive reinforcement for desired behavior, while Robbins & Judge emphasized the importance of the reward system in increasing work motivation. Griffin et al. also stated that an effective reward system can create loyalty and job satisfaction, which improves performance. Pratama et al. (2017) showed that appropriate rewards can increase nurse motivation and job satisfaction, which ultimately improves service quality and compliance with patient safety standards. Chiang & Birtch added that non-financial rewards play an important role in increasing long-term motivation.

### **The Influence of Leadership on Patient Safety Culture**

Leadership has a significant influence on patient safety culture, with effective leaders able to create an environment that supports the implementation of patient safety principles. According to Robbins & Judge and Yukl, good leadership facilitates risk management and ensures effective communication within the organization, which is important in building a culture of safety. Burns emphasized that transformational leadership can inspire subordinates to exceed expectations through personal influence, which also supports the creation of a patient safety culture. Research by Hartono et al. (2020) showed that leadership that supports and motivates the team improves the implementation of a patient safety culture in hospitals. These findings reinforce that the role of leadership is very important in creating commitment to patient safety, as explained by Vincent who stated that a patient safety culture includes organizational values and behaviors that support transparency and learning from mistakes.

### **The Influence of Reward Systems on Patient Safety Culture**

The reward system has been shown to have a significant effect on patient safety culture. Rewards for good performance in patient safety can encourage nurses to be more consistent in implementing safety protocols and increase their awareness of the importance of patient safety. This is in line with the opinions of Lawler who stated that rewards can strengthen commitment to organizational values. Shields (2016) added that non-financial rewards such as recognition play an important role in building motivation and loyalty to the organization. Vincent also stated that patient safety culture is the result of organizational values that support learning and risk prevention. Research by Pratama et al. (2017) showed that fair and structured rewards significantly encourage the implementation of a patient safety culture.

### **The Influence of Nurse Motivation on Patient Safety Culture**

Nurse motivation has a significant influence on patient safety culture. Motivated nurses tend to be more committed to implementing patient safety protocols and ensuring that every action taken is in accordance with safety standards. Maslow stated that motivation is rooted in individual needs, from basic needs to self-actualization, which drives nurses to commit to patient safety. Armstrong stated that motivation is the driving force of individual behavior to achieve organizational goals, including in terms of improving patient safety. This finding is reinforced by research by Wulandari et al. (2019) which showed that high nurse motivation significantly improved patient safety culture. This indicates that high motivation drives nurses to work harder to create a safe and high-quality environment.

### **The Influence of Leadership on Nurse Motivation through Reward System Mediation**

Effective leadership can indirectly influence nurse motivation through the reward system. Leaders who provide appropriate rewards and support nurses' career development can increase their motivation to perform better. According to Lawler, structured rewards can increase motivation through positive

reinforcement. Research by Faridah et al. (2019) supports this finding, showing that good leadership facilitates nurse motivation through relevant rewards and a well-organized reward system.

### **The Influence of Reward System on Patient Safety Culture through Nurse Motivation Mediation**

The reward system has a significant effect on patient safety culture through mediating nurse motivation. Fair and measurable rewards increase nurse motivation, which in turn strengthens patient safety culture. In line with the motivational theory proposed by Maslow, rewards given to nurses not only increase their motivation but also create a positive relationship with the organization. Research by Pratama et al. (2017) shows that an effective reward system can increase nurse commitment to patient safety standards, through higher motivation and increased awareness of the importance of patient safety.

### **CONCLUSION**

This study reveals that leadership positively influences patient safety culture, with nurse motivation playing a crucial mediating role. Effective leadership motivates nurses to focus on patient safety, while a fair reward system—both financial and non-financial—further enhances motivation, ultimately strengthening the safety culture. The research contributes to organizational behavior theory by highlighting the importance of leadership, reward systems, and motivation in shaping a patient safety culture. The findings emphasize the significance of providing both financial and non-financial rewards to increase nurse loyalty and improve patient safety practices. Based on these results, it is recommended that hospital management enhance leadership involvement, implement transparent performance-based rewards, and improve nurse welfare through competitive salaries and non-financial rewards. Future research should explore longitudinal studies, comparative research across healthcare settings, the impact of leadership development programs, and the role of technology in patient safety. Further investigation into other mediating factors and the specific impact of non-financial rewards could offer deeper insights into how to optimize nurse motivation and enhance patient safety culture.

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