

# Analysis of Managerial Leadership on Improving the Quality of Hospital Services Through Patient Safety Culture at dr. Darsono Hospital, Pacitan, East Java

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## ABSTRACT

**Background:** Patient safety is an important issue because of the large number of medical error cases that occur in various parts of the world. Patient safety culture is the first step in developing safety because it contains values, attitudes, competencies, and behavioral patterns that determine patient safety programs. The aim of this research is to analyze the influence of managerial leadership on improving the quality of hospital services through a patient safety culture.

**Subjects and Method:** This was a quantitative study with an explanatory approach. The population used was health workers at Dr. Darsono Hospital, as many as 240 people. Based on the proportionate stratified sampling technique, a sample of 148 people was obtained. This research consists of independent variables and dependent variables. Independent variable is managerial leadership and the dependent variables are patient safety culture and hospital service quality. The data was then analyzed using SEM PLS.

**Results:** The results of the analysis show that managerial leadership has a significant effect on patient safety culture and improving service quality ( $p < 0.001$ ), patient safety culture has a significant effect on improving service quality ( $p < 0.001$ ), and patient safety culture can mediate the relationship between managerial leadership and service quality ( $p < 0.001$ ). The values of the patient safety culture determination coefficient of 64.9% and the service quality variable of 80.9% showed both variables influenced this study; the remaining 35.1% and 19.1% were explained by other variables outside the study model.

**Conclusion:** Patient safety culture at Dr. Darsono Hospital is in the sufficient category; a managerial leadership role is needed to improve the implementation of patient safety culture so that the quality of hospital services can increase optimally.

**Keywords:** managerial leadership, service quality, patient safety culture, hospital

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## BACKGROUND

The degree of public health is affected by various factors, one of them is health service. Hospitals are responsible for analyzing the

systems implemented in their organizations, where the main goal is patient outcome, including patient safety issue. DiCuccio (2015) stated that a patient safety is part of

hospital safety, including safety of equipment and building, environment, hospital business and individual. According to the Ministry of Health (Kemenkes RI, 2017), culture of patient safety is a product of the value, attitudes, competencies and behavioral patterns of individuals and groups determining the commitment, style and ability of a health service organization towards patient safety programs. Therefore, culture of patient safety is the first step in developing patient safety.

In America, every year, almost 100,000 patients die due to medical errors (Vellyana, 2015). Makary & Daniel stated that a number of medical errors still frequently face various health facilities and these are considered as main cause of death globally. The National Patient Safety Agency reported that, in the period January – December 2016, the number of incidents of patient safety reported in England was 1,879,822 incidents. (Daud, 2020) reported that there were 7,465 incidents of patient safety in Indonesia in 2019, consisting of 171 deaths, 80 serious injuries, 372 moderate injuries, 1183 minor injuries, and 5659 without injuries. However, data on patient safety in Indonesia is still difficult to obtain due to problems with the reporting system. Ideally, all facilities of health care in Indonesia should report incidents to the committee of patient safety (KKPRS, 2015).

The important role in implementing a system of patient safety is to prevent injuries caused by errors resulting from an action taken. One factor playing an important role in creating a culture of patient safety is the leader. The concept of thinking about patient safety is the result of leadership thinking; steps to optimize movements of patient safety in hospitals are carried out by establishing collaboration between all policy makers in the hospitals. Leadership produces a culture of patient safety; therefore, leaders

must always make continuous efforts to prevent injuries to patients (Kartika et al, 2015). According to (Adventus et al, 2019), the role of leaders in improving patient safety is to encourage and ensure the implementation of integrated programs of patient safety, ensure that proactive programs for identifying risks of patient safety and programs to reduce adverse events/KNC take place, foster communication and coordination between units regarding decision making on patient safety, allocating adequate resources to measure, review and improve performance and patient safety.

Study by (Vellyana, 2015), regarding the implementation of patient safety culture showed that management support was still not optimal, the working hours and workload were not appropriate, and there were still processes of patient safety program that had not been implemented. Another study by (Wijayanti, 2016) found that the picture of patient safety culture of employees was generally positive. The dimension having the highest positive response was organizational learning (96.3%), and the dimension having the lowest positive response was staffing (9.4%); therefore, hospitals are expected to be able to continue and maintain patient safety's programs, evaluating the number of employees they have. exist, increasing motivation to report incidents and carrying out comprehensive and periodic measurements of patient safety culture.

Observation results at dr. Darsono hospital, Pacitan showed that the culture of patient safety has not been implemented optimally, seen from the lack of discipline in employee performance in recording and reporting incidents occurring in the hospital. In addition, the expectations of the community as customers regarding the quality of hospitals have not been fully met, as evidenced by the fact that there are still complaints from the public regarding the

services provided. These results support the survey of 2022 patient safety culture assessment at dr. Darsono Hospital, Pacitan, showing that the overall level of patient safety has only been achieved at 74.18%. The dimension of patient safety incident reporting was the lowest assessment with a percentage of 21.46% and the dimension of communication was 57.65%. Meanwhile, the dimension of patient safety received an assessment of 74.18%, the dimension of unit or work area was 75.14%, and the dimension of supervisor, manager or clinical leader was 77.21%. It shows that the culture of patient safety has not been implemented optimally, especially in the dimensions of patient safety incident reporting and communication, so it needs to be improved in order to provide better health services.

Based on the above explanation, there are still some problems related to patient safety services. Hospitals as health care centers are required to enhance a culture of patient safety by improving the overall quality, efficiency, and productivity of services. Some of the things that can be done are the formation of regulatory bodies, the establishment of evaluation instruments, periodic evaluations, the provision of education and training, and so on. It is not only expected to improve the security culture but also the quality of hospital service as a whole.

The general objective of this study is to analyze the influence of managerial leadership on improving the quality of hospital services through a patient safety culture at dr. Darsono Hospital, Pacitan.

## SUBJECTS AND METHOD

### 1. Study Design

The type of this study is quantitative with an explanatory approach, namely a study with objective to test a theory or hypothesis in order to strengthen or reject the research hypothesis. The location of the research was

conducted at Dr. Darsono Hospital, Pacitan in December 2023.

### 2. Population and Sample

The respondents of this study were health employees at RSUD dr. Darsono Pacitan as many as 240 people. The sampling technique using the Krejcie & Morgan table and proportionate stratified sampling obtained a total sample of 148 people.

### 3. Study Variables

The independent variables was managerial leadership. The dependent variables were patient safety culture and hospital service quality.

### 4. Operational Definition

**Managerial leadership** is a person's behavior in directing and influencing the activities of all human resources in hospitals through planning, organization, direction, and control.

**Quality of Hospital** is a level of service perfection sought by management and all health workers is oriented towards patient satisfaction.

**The last Patient Safety Culture** is a integration of values, attitudes, competencies, and behavioral patterns of all health workers that determines commitment, style, and ability to patient safety programs.

### 5. Study instruments

The data research instrument used a questionnaire consisting of 18 statements on the managerial leadership variable, 15 statements on the service quality variable and 35 statements on the organizational culture variable. The researchers used a questionnaire with a response score of 4 = absolutely agree, 3 = agree, 2 = disagree and 1 = disagreed.

### 6. Data analysis

The data were then analyzed descriptively by SPSS 17.00 to describe the characteristics of respondents, including gender, age,

education, etc., and processed by using Structural Equation Modeling (SEM) in Partial Least Square (PLS) to detect direct and indirect relationships between variables or constructs, which is carried out in two stages. The first stage is to evaluate the measurement model using validity, reliability, convergent validity, and discriminant validity testing, and the second stage is to evaluate the structural model using the criteria of coefficient of determination (R<sup>2</sup>), cross-validated redundancy, and path coefficients.

**7. Research Ethics**

Research ethical issues including informed consent, anonymity, and confidentiality,

were addressed carefully during the study process. The research ethical clearance approval letter was obtained from the Research Ethics Committee at RSUD dr. Darsono Pacitan, Indonesia, No. 000562/EC/KEPK/I/12/2023, on December 5, 2023.

**RESULTS**

**1. Sample Characteristics**

Characteristic data of 148 respondents can be seen in Table 1. Table 1 shows that the majority of respondents were female (71.38%), aged 36-45 (45,27%). A total of 55.41% of respondents had a final DIII education.

**Table 1. Sample characteristics**

Characteristics	Category	Frequency	Percentage
<b>Gender</b>	Male	42	28,38
	Female	106	71,62
<b>Age</b>	< 25	15	10,14
	26 – 35	41	27,70
	36 – 45	67	45,27
	46 – 55	22	14,86
	56 – 65	2	1,35
	> 65	1	0,68
<b>Last Education</b>	DIII	82	55,41
	DIV	4	2,70
	S1	33	22,30
	S2	1	0,68
	Profesi	22	14,86
	Others	6	4,05

**2. Univariate Analysis**

Based on Table 2 above shows that managerial leadership variables are in the

category of good (95.27%), quality of good service (97.97%), and patient safety culture are also in the class of good (78.38%).

**Table 2. Distribution Research Variable Category**

Variable	Category						Total	
	Good		Enough		Less		n	%
	n	%	n	%	n	%		
<b>Managerial Leadership</b>	141	95,27	7	4,73	0	0,0	148	100,0
<b>Quality of Hospital Services</b>	145	97,97	3	2,03	0	0,0	148	100,0
<b>Patient Safety Culture</b>	116	78,38	32	21,62	0	0,0	148	100,0

### 3. Bivariate Analysis

#### a. Measurement Model/Outer Model Test

Table 3 shows the loading factor values on all indicators obtained values  $\geq 0.71$  so all the indicators are said to be valid.

Table 4 shows that loading factor values on all indicators obtained values

$\geq 0.71$  so all the indicators are said to be valid.

Table 5 shows the loading factor values on all indicators obtained values  $\geq 0,708$  so all the indicators are said to be valid.

According to Table 6, the entire construction in the study had a composite reliability value  $\geq 0.7$ , so all constructs were reliable.

**Table 3. Loading Factor Values of The Managerial Leadership Variable**

Indicator	Loading Factor Values
The ability to communicate	0.82
Decision-making skills	0.92
Self-confidence	0.86
Integrity	0.92
Responsibility	0.90
Visionary Skills	0.89

**Table 4. Loading Factor Values of The Quality of Hospital Services Variable**

Indicator	Loading Factor Values
Reality	0.82
Response Power	0.96
Guarantee	0.92
Empathy	0.91
Physical proof	0.91

**Table 5. Loading Factor Values of The Patient Safety Culture Variable**

Indicator	Loading Factor Values
Communication openness	0.88
Feedback	0.89
Incident reporting frequency	0.77
Handoff and transition	0.92
Organizational support	0.91
The response is not judgmental	0.86
Sustainable Learning	0.90
Overall perception	0.95
Staffing	0.88
Supervisor	0.91
Cross-cooperation	0.80
Inter-unit cooperation	0.86

**Table 6. Composite Reliability Values**

Variable	Composite Reliability
Managerial Leadership	0.96
Quality of Hospital Services	0.96
Patient Safety Culture	0.98

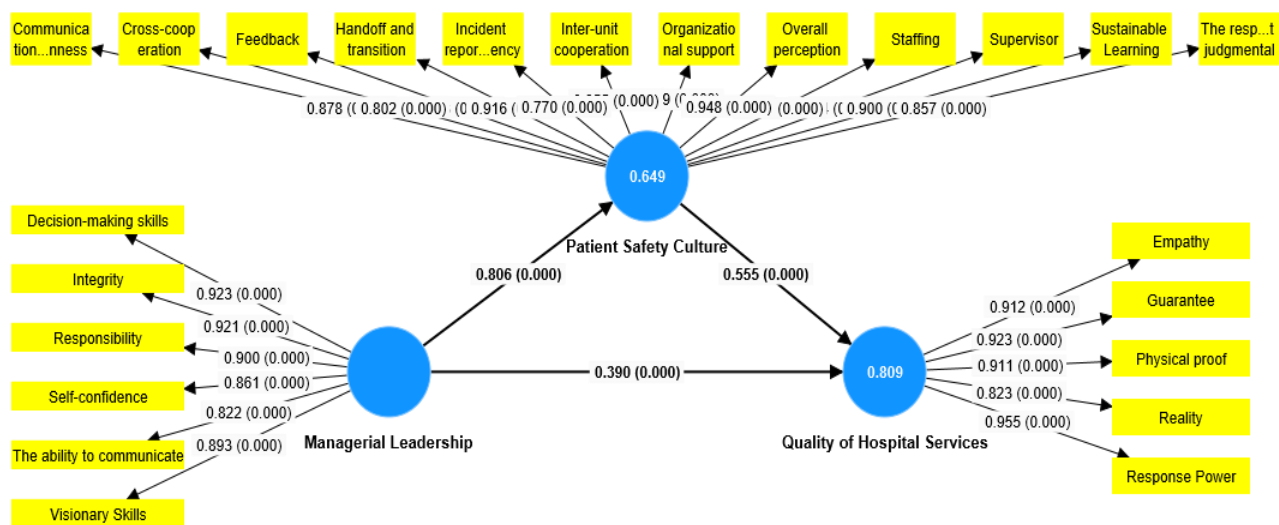
Table 7 shows that all three constructs have AVE values well above the 0.50 threshold. This results support the validity

of the measurement model used in the study.

**Table 7. AVE Values**

Variable	AVE Values
Managerial Leadership	0.79
Quality of Hospital Services	0.82
Patient Safety Culture	0.77

**b. Measurement Inner Model**



**Figure 1. Inner Model Measurement Results**

The results of the model's inner intersection are shown in the following table:

**Table 8. Evaluation of Direct Effect and Indirect Effect**

Dependent Variable	Independent Variable	b	95% CI		p
			Lower Bound	Upper Bound	
<b>Direct Effect</b>					
Managerial Leadership	→ Quality of Hospital Services	0.39	0.23	0.59	<0.001
Culture of Patient Safety	→ Quality of Hospital Services	0.56	0.36	0.71	<0.001
Managerial Leadership	→ Culture of Patient Safety	0.81	0.72	0.88	<0.001
<b>Indirect Effect</b>					
Managerial Leadership	→ Quality of Hospital Services	0.45	0.29	0.60	<0.001

p= (≤0.05).  
 RMSEA = (<0.08)  
 CFI = (>0.90)  
 TLI = (>0.90).  
 SRMR= (<0.08)  
 CD = (<0.05)

Table 8 shows that managerial leadership positively and significantly affects hospital service quality ( $b = 0.39$ ,  $p < 0.001$ ). Patient safety culture also has a significant positive impact on service quality ( $b = 0.56$ ,  $p < 0.001$ ). Additionally, managerial leadership strongly influences patient safety culture ( $b = 0.81$ ,  $p < 0.001$ ). Patient safety culture significantly mediates the relationship between managerial leadership and service quality.

## DISCUSSION

### 1. Effect of Managerial Leadership on Patient Safety Culture

Leadership is an important factor in building a patient safety culture. In line with the analysis results showing that managerial leadership has a positive and significant effect on patient safety culture with a path coefficient value (original sample) of 0.806 and a  $p$ -value  $< 0.001$ . The positive effect shows that the better the managerial leadership, the better the patient safety culture is. Study by (Miladiyah and Sarwati, 2019) found that improvement of patient safety culture is supported by a strong leadership role. A leader is someone whose job is to guide, affect and motivate other people with their qualities and abilities to achieve certain goals. An effective leader will inspire confidence and trust in team members to achieve maximum cooperation and guide them through daily activities related to their work, including implementation of a patient safety culture (Indeed, 2022). The role of leaders is not only as implementers of policies implemented by the hospital, they also act as managers who are tasked with organizing and directing members in carrying out their duties and responsibilities according to their respective sections.

A total of 141 respondents (95.27%) stated that managerial leadership at RSUD

dr. Darsono is in the good category. Patient safety is a cultural transformation; a leader with his leadership can make cultural changes into the success of the patient safety program. Setiowati et al. (2013) stated that the head of the ward is a nurse who has responsibility and authority in organizing and controlling nursing activities in the ward. The head of the ward as a first line manager has a critical role in supporting patient safety culture with leadership and creating a positive environment and culture for patient safety. Meanwhile, seven people (4.73%) said they “do not agree” with the statement that “leaders often reward members with good performance so that other members can be motivated to implement a health and safety culture at work.” It shows a lack of visionary leadership skills in increasing employee motivation to take safety action.

Our findings show that managerial leadership significantly influences the development of a patient safety culture. In the healthcare sector, leaders play a crucial role in motivating staff to deliver services willingly, driven by humanitarian values and a commitment to safety. To support this, leaders must continuously encourage the implementation of patient safety practices as established by the hospital.

Beyond motivation, rewards also serve as a form of recognition and appreciation for employees' efforts in upholding patient safety standards. However, the reward system must be well-structured. Poorly managed rewards can have adverse effects—research conducted among nurses in Brazil found that an imbalance between effort and reward can lead to psychological stress, which may negatively impact job performance (Habibi et al., 2021).

### 2. The Effect of Managerial Leadership on Quality Service

The results of the study indicate that managerial leadership has a positive and

significant impact on improving the quality of hospital services, as evidenced by a path coefficient (original sample) of 0.837 with a significance level of  $p < 0.001$ . This suggests that managerial leadership contributes to an increase in service quality by approximately 84%. In other words, the better the quality of leadership at RSUD, the higher the level of hospital service quality that can be achieved.

Panjaitan (2010) found a significant relationship between leadership and service quality, with effective leadership contributing to a 0.384 increase in service quality. In the service industry, product quality is reflected in the quality of service, making it essential for management to understand service delivery from the customer's perspective. Service quality perceived from the customer's viewpoint can enhance the overall value of the organization's offerings.

For hospitals, this means delivering services that meet patients' needs and expectations—specifically in terms of reliability, responsiveness, assurance, empathy, and tangible aspects (physical evidence). These dimensions are critical in ensuring patient satisfaction and improving the overall reputation and effectiveness of healthcare services.

In essence, leading by example is a critical trait of effective leadership. The ability to present clear and effective information is a valuable asset in communication, while authority and sound decision-making are also key qualities a managerial leader must possess. Leaders who demonstrate these attributes are often seen as role models by their team, which can positively influence employee performance.

The study results show that 120 respondents (81.08%) agreed with the statement, "The self-confidence of the leader makes the work environment more positive and productive, thereby improving patient safety." This indicates that a leader's actions significantly

impact the nurses' work environment. Since the quality of nursing performance directly influences the quality of care provided to patients, poor managerial leadership can lead to decreased staff performance and ultimately lower the overall quality of hospital services.

### **3. The Effect of Patient Safety Culture on Quality Services**

The results of the study show a positive and significant relationship between patient safety culture and the improvement of hospital service quality. This indicates that the stronger the implementation of patient safety culture, the higher the quality of services provided at Dr. Darsono Hospital.

Supporting this, a study by Ghofar et al. (2021) found that implementing patient safety culture across various aspects of hospital operations is a key strategy for enhancing service quality. Establishing a strong culture of safety is essential, as it leads to more effective patient safety outcomes compared to relying solely on safety programs. A focus on culture ensures that patient safety becomes a shared value and daily practice among all healthcare staff.

Patient safety culture is the foundation in efforts to implement patient safety as the main priority in providing health services (Pratiwi, 2022). Improvement of the perception of patient safety culture in the health service sector plays a key role in improvement of the quality, efficiency and productivity of services as a whole, so that its implementation will have a direct effect on creation of quality services. In this study, the implementation of patient safety culture was assessed under the dimensions of openness for communication, feedback and communication, frequency of incident reporting, organizational support, non-judgmental response to errors, continuous learning, perception of safety, staffing, supervisors, and collaboration across and between units.



If all of health staff are able to implement a patient safety culture with these dimensions, then the quality of hospital services will have a positive effect. Quality of service, in this case, is a guarantee of a sense of security for patients because they receive fast service, handled by nurses or doctors who are competent in their field, and fulfill the needs and complaints felt by patients. In addition, a safety culture successfully implemented well will be felt by the public in general.

The response trend showed that the highest number of participants—37 respondents (25.00%)—strongly agreed with the statement, “The staff in my ward support and respect each other.” This indicates that staff cooperation at Dr. Darsono Hospital, is well established, supporting a strong foundation for implementing a patient safety culture.

In contrast, the statement “The number of staff where I work is sufficient for needs” received the highest number of disagree responses, with 19 respondents (12.84%). This suggests that staffing levels at Dr. Darsono Hospital are still insufficient, indicating a need for additional personnel to reduce workload and prevent staff burnout or stress.

#### **4. Role of patient safety culture as a mediating variable for managerial leadership and quality service**

Patient safety culture can significantly mediate the relationship between managerial leadership and service quality. Based on the coefficient of determination, patient safety culture was found having an effect of 64.9% in this study, while service quality had an effect of 80.9%. (Sohail, 2013) study indicated that leadership contributes greatly to spurring improvements in the quality of services in hospitals. A leader with character will determine the direction of his organization. Leaders having good management competence can encourage their resources to implement a patient safety culture. Patient

safety culture is a product of the values, attitudes, competencies and behavioral patterns of individuals and groups determining the commitment, style and ability of a health service organization towards patient safety programs. A health service organization is assessed for its ability to cure and save patients, the low number of undesirable events and other things related to injuries to patients will improve the quality of service based on the public's assessment or perception, in terms of both staff capabilities and available infrastructure.

According to The Joint Commission (2017), hospital guidelines that promote a strong patient safety culture emphasize the critical role of leadership. This includes leaders making decisions that support patient safety and consistently demonstrating a commitment to patient safety in both their actions and behavior. It shows that leadership directly supports patient safety culture, enhancing hospital service quality.

#### **AUTHOR CONTRIBUTION**

All authors have made significant contributions to data analysis as well as preparing the final manuscript.

#### **CONFLICT OF INTEREST**

There is no conflict of interest in this study.

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