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Does Leadership Affect the Patient Safety Climate? Study at X Hospital Indonesia

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ABSTRACT

Background: Patient safety is a component and main principle in service delivery. Patient safety can be realized with a positive patient safety climate. The main factor that plays a role in the patient safety climate is management commitment, which includes reward and punishment, management commitment, and leadership. This study aims to see the relationship between reward punishment, management commitment, and leadership variables with the patient safety climate. **Method**: The method used was cross-sectional at X hospital, with a total of 70 respondents. **Result:** The study results indicate that there is no relationship between reward punishment, management commitment, and leadership variables with the patient safety climate because the concept of patient safety that has been running in X hospital is more to the understanding inserted into other programs. **Conclusion**: So, the absence of a patient safety program causes a lack of employee perception of the three management factors, which are the research variables. **Recommendation**: The suggestions put forward to create an exceptional team and increase the leadership's commitment to patient safety.

Keywords*: Leadership, Hospital, Patient Safety Climate*

1. INTRODUCTION

Hospitals, as health service providers, are required to provide holistic health services for consumers. Excellent service is the central core expected by every consumer who comes in contact with the hospital. Consumers here include patients, patient families, and society at large. Six dimensions in the quality of hospital services include patient safety, efficient, effective, timeliness, patient-centered, and equity [1]. The hospital is a public service facility that has a significant risk for patients, including the dangers of medical intervention[2]. Hospital activities can cause physical, chemical, biological, ergonomic, and psychosocial hazards that can endanger health and safety for workers, patients, visitors, and the community in the hospital environment. Actions to prevent and reduce health and safety hazards, especially to workers, need to be done through occupational health and safety efforts [3]. Patient safety is the main component and principle in service delivery [4]. Institute of Medicine (IOM) report in 1999 it publicly stated that at least 44,000 even 98,000 patients died in hospital within one year as a result of medical errors, which could have been prevented. This quantity exceeds deaths from traffic accidents, breast cancer, and AIDS. Another report, in the last 20 years, HAI (Healthcare-Associated Infection) increasing more than 36% each year [4]. This condition is detrimental to patients in the financial and health sectors. As consumers, patients deserve the best service and without any negative or adverse effects. The main recommendations for minimizing accidents and increasing safety for workers and patients being treated are creating safety culture in the organization of health care providers [1]. By creating positive safety culture hospitalization can eliminate the potential risk to the patient. Safety culture becomes a significant part of the health care provider organization whose main objective is to improve patient safety[6]. Possible reasons why health organizations are so challenging to develop safety management systems is the neglect of two very fundamental aspects, namely workers' perceptions (for example, safety climate) and worker motivation [7]. If a hospital wants to increase patient safety. The first requirement that must be done is to measure how big the safety culture is. This measurement can quickly be done by measuring safety climate[8]. The Ministry of Health emphasizes the importance of a safety culture/safety culture through the first step of "Seven Steps Toward KPRS," namely building patient awareness and safety values. When an accident happened, it is a signal about the safety climate that underlies the organization [9].

The Ministry of Health of the Republic of Indonesia has determined eight factors that can affect patient safety, namely external hospital factors, organizational and management factors, work environment, officers, teamwork, workload, patient factors, and built communication [10]. The main factor that plays a role in safety climate is management commitment [11]. Safety climate affects several things in the organization, including the selection of safe behavior, the behavior of coworkers, leading to a safer work environment and leading the organization to increase perceptions of a safer work environment [12]. Patient safety climate is a multidimensional phenomenon and requires consensus from the leadership and management team [13]. Creating a patient safety climate involves changes in management behavior, safety systems, and employee perceptions that affect the delivery of health services [14]. The leadership factor is assessed by commitment and support to Patient safety, the clarity provided by the leadership regarding what must be done to reduce the incidence of patient accidents, and the leadership's communication skills with all levels in the hospital. This study aimed to see if there was a relationship between leadership, reward & punishment, and commitment toward patient safety climate. These three variables are an essential part of hospital management. Organizational commitment is the main element in building a safety culture dan safety climate in an organization. Cooper (2001) puts commitment from management, leadership, and involvement as the first of the seven factors influencing culture and positive safety climate [15].

2. METHODS

This research is classified as an observational study. The approach used in this research is a cross-sectional study to understand the dynamics of the correlation between independent and dependent variables through observation and data collection concurrently. In this study, an analytical survey will be conducted to understand the employees' perceptions of the working environment regarding patient safety climate. The research samples were employees of X Hospital, including medical providers, support services, and support services. The total number of samples is 71 people, who have qualified the minimum survey sample of 30 people. A questionnaire was used to determine the independent variables. The questionnaire was compiled based on discussions with some of the hospital leadership and management team members regarding the factors that are expected to affect the patient safety climate in the hospital X. The questionnaire was developed to describe how the variables become indicators to formulate questions. The questionnaire was then adjusted to Patient Safety Climate on Health Care Organisation to measure the dependent variable. Hence the continuity between the two is ensured. Data managements conducted in this study were questionnaires, the questionnaire collection, coding, data input, and data analysis. Analysis of the data is a continuation of data processing stages. Data analysis is the process of simplification of data into a form that is easier to read and interpret. In this study, data analysis includes analysis of univariate and bivariate analysis using chi-square test.

3. RESULTS

Patient Safety Climate

Distribution of respondents' perceptions of patient safety climate variables is divided into two categories, namely functional and less

Table 1. Respondents' Perception Results Based on Patient Safety Climate

Patient safety Climate	Total	Percentage (%)
Good	38	55.9
Less	34	44.1
Total	71	100

Assessment of patient safety, which runs in the hospital, gave results that 55.9% of respondents rated it as useful, and 44.1% considered it less.

Reward dan punishment

Distribution of respondents' perceptions of the reward & punishment system is divided into two categories: the results of the perception that states the reward & punishment system is supportive and less supportive.

Table 2. Respondents' Perception Results Based on Reward dan Punishment Variables

Reward & Punishment	Total	Percentage (%)
Supportive	48	68.6
Less supportive	23	31.4
Total	71	100

In reward & punishment variables, results are categorized by cut off point means the results show that 48 (68.6%) of respondents stated the reward & punishment system prevailing in hospitals support patient safety. About 22 (31.4%) respondents stated the reward & punishment system, which prevailed less supportive.

Commitment

The distribution of hospital staff's perceptions of management commitment in providing the necessary facilities and infrastructure, including an adequate budget, facilities, structures, and policies to support a patient safety climate is divided into two categories, namely supportive and less supportive.

Table 3. Results of Respondents' Perceptions of Management Commitment

Commitment	Total	Percentage (%)
Supportive	48	67.6
Less supportive	23	32.4
Total	71	100

In the commitment variable, the results are categorized according to the cutoff point mean value, which is then divided into management commitment to supportive and less supportive Patient safety issues. Based on table 3, some respondents (67.6%) stated that management commitment supports patient safety while the rest (32.4%) stated that management actions to show commitment to patient safety are less supportive.

Leadership

The distribution of the results of the hospital staff's perceptions of the leadership variables was divided into two categories, namely supporting and less supportive.

Table 4. Respondents' Perceptions Results Based on Leadership Subvariables

Leadership	Total	Percentage (%)
High	**54**	**77.1**
Low	**17**	**22.9**
Total	**71**	**100**

In the leadership variable, the results are categorized according to the cutoff point, the mean value, which is then divided into leadership levels that support patient safety in the hospital and are less supportive. Table 4 shows that 54 (77.1%) respondents stated that the existing leadership supports creating a patient safety climate. Meanwhile, 16 respondents (22.9%) stated less supportive leadership.

Reward & Punishment Relationship toward Patient Safety Climate

Tabel 5. Reward & Punishment Relationship Towards Patient Safety Climate

Reward & Punishment	Patient Safety Climate		Total	P
	Good	Less		
Supportive	20	17	37 (52.1%)	0.725
Less Suppoertive	16	18	34 (47.9%)	
Total	36	35	71 (100%)	

Table 5 shows that 20 respondents who have the perception that the existing rewards & punishments support patient safety also perceive the patient safety climate in X hospital as good. Meanwhile, 17 other respondents also had the perception that the real reward & punishment supported patient safety and perceived that the patient safety climate in X Hospital was lacking. On the other hand, 16 respondents who perceive the real reward & punishment do not support patient safety also perceive the patient safety climate in X Hospital as useful Meanwhile, 18 respondents who also had the perception that reward & punishment did not support patient safety also perceived that the patient safety climate in X hospital was inadequate. Based on calculations with the chi-square test, p= 0.725 is obtained p>α, which means there is no relationship between reward & punishment sub variable with patient safety climate.

Management Commitment Relationship Towards Patient Safety Climate

Table 6. Management Commitment Relationship toward Patient Safety Climate

Management Commitment	Patient Safety Climate		Total	P
	Good	Less		
Supportive	14 (19.7%)	14 (19.7%)	28 (39.4%)	
Less Supportive	22 (31.0%)	21 (29.6%)	43 (60.6%)	1
Total	36 (50.7%)	35 (49.3%)	71 (100%)	

In table 6, it can be seen that 14 respondents who have the perception that existing management commitments support patient safety also perceive the patient safety climate in X Hospital is good. Meanwhile, 14 other respondents who had the perception that the existing management commitment supported patient safety, perceived the patient safety climate in X Hospital was lacking.

On the other hand, 22 respondents who have the perception that the existing management committee does not support patient safety perceive the patient safety climate in X hospital is excellent. Meanwhile, 21 respondents who also had the perception that management commitment was less supportive of patient safety climate, perceived that patient

safety in X hospital was lacking. Based on the calculation with the chi-square test, the value of p = 1 is obtained, then p> α, meaning that there is no relationship between the sub- variable management commitment and the patient safety climate.

Leadership Relationship Towards Patient Safety Climate

Tabel 7. Leadership Relationship Towards Patient Safety Climate

Leadership	Patient Safety Climate		Total	P
	Good	Less		
Supportive	18 (25,4%)	14 (19.7%)	32 (45%)	0.543
Less Supportive	18 (25.4%)	21 (29.6%)	39 (54.9%)	
Total	35 (50.7%)	35 (49.3%)	71 (100%)	

In table 7 It can be seen that 18 respondents who have the perception that the existing leadership supports patient safety also perceive the patient safety climate in X Hospital is inadesant. Meanwhile, 14 other respondents who had the perception that the existing leadership supported patient safety perceived that the X hospital's patient safety climate was lacking.

On the other hand, 18 respondents who had the perception that the existing leadership did not support patient safety perceived the patient safety climate in X hospital was excellent. Meanwhile, 18 respondents who also had the perception that leadership was less supportive of patient safety perceived that the patient safety climate in X hospital was inadequate. Based on the calculation with the chi-square test, the value of p = 0.543 is obtained, then p> α, meaning that there is no relationship between the leadership sub-variable and the patient safety climate

4. DISCUSSION

Leadership is an aspect that has various definitions. Leadership is usually associated with power, influence, and prosperity [16]. Leadership can be defined as a tool

to guide the process of achieving goals [17] as a multidimensional phenomenon of patient safety climate, senior management and leadership roles in the hospital have an essential role [18]. Leaders in a hospital are not only the highest level in the organization, but the leaders also referred to in this study include room heads who are directly in contact with employees who are in the ranks of service providers. The leader can mean the head of the room, head of the installation, head of medical records, and others. The leader can also be a nurse, doctor, nutritionist, management expert, and other fields related to the part being led [19]. All of the leadership elements above make the same contribution to creating a positive patient safety climate. For example, in a hospital, leadership in the nursing field is one of the critical components in service delivery because it is responsible for a climate of decision-making, coordination, and delegation [20].

Successful leaders can be identified by their success in motivating their subordinates to reach the maximum capacity of these subordinates. When subordinates have reached their maximum capacity at work, it is easy to coordinate in carrying out the basic principles of safety and achieving goals.

The leadership model needed by an organization is different depending on the organization being led. Applying patient safety is more effective when using democratic leadership types than other types of leadership. Barling et al. (2002), conducting research that looks for the relationship between transformational leadership and worker safety, has concluded that all actions and decisions made by management and leadership have a significant influence on how workers feel about the concept of safety. A suitable leadership type also contributes significantly to work effectiveness (Kanter, 1993, in Merril, 2011). A good leader is expected to give a positive impression and role model for subordinates. The type of leadership greatly influences employees' perceptions of the goals and programs implemented in an organization or agency. Hospitals and other health care providers are concrete examples of organizations that have macro and microsystems. It means that there are various levels of leadership to consider. As the holder of the highest leadership position, the director is not possible to supervise and supervise and coach all employees in the hospital.

In the micro range, the hospital has smaller integrated sections that provide direct services to consumers. The micro-unit also has leaders who have the task of supervising and other leadership tasks directly to existing employees. Useful communication patterns are needed for the smooth running of the daily tasks of the micro-unit and the achievement of organizational goals. Kanter in Merril (2011) explains that power and leadership are found in a visible work scope that allows for a decision-making process and strength in interpersonal relationships. Another key to leadership is providing opportunities for subordinates. When subordinates have the opportunity to develop knowledge and skills, this will make them as individuals who can make practical approaches to problem- solving, become agents of reform and are more able to accept new things that are considered beneficial for progress. Individuals who get small opportunities will feel trapped in their work and have little motivation to develop (Merril,2011).

The leader is obliged to master the abilities and skills in safety measures; otherwise, it will have a fatal impact on subordinates (Gershon et al., 2000). As an example of handling avian flu patients, handling these patients requires unique and complex handling standards, including personal protective equipment and isolation rooms, which will protect employees and protect other patients and the bird flu patient itself. It would be fatal if the leadership did not know the procedures and mechanisms for handling the bird flu patient because the employees would follow the instructions from the leadership and ignore the knowledge they had.

Based on the research results of Laschinger (1996) regarding nurse leadership, they were giving the results of a leader who gives confidence to his subordinates will increase work productivity [21]. Nurses who have been given full trust are proven to be more loyal to the organization, more satisfied with the work done, and are reported to have better patient safety outcomes. When workers are given the freedom to make decisions and how they do work, these workers will feel a greater responsibility for the results obtained even though these results cannot be determined for good or bad. A leader must have ideas and be innovative at work. Poor communication is one of the causes of failure in implementing safety in organizations [22].

The management's involvement is reflected in the commitments made and in their implementation in the form of regulations, policies, and joint consensus between the management and employees. The reason management support is vital because this support will create a positive perception for employees. This positive perception will be implemented in work motivation and actual application in supporting patient safety efforts.

The hospital is a system where the hospital makes patient care safer. It includes risk assessment, identification, and management of matters related to patient risk, incident reporting, and analysis, the ability to learn from incidents, and their follow-up and implementation of solutions to minimize risks. This system prevents injuries caused by errors caused by acting. Alternatively, they are not taking the action that should be done.

The system referred to in the explanation above is poured into the patient safety program in which there is a hospital safety team, an information system for internal recording and reporting, an incident reporting system to the hospital safety committee, compliance with patient safety standards and the development of education and training against the newly established standards. If there is no patient safety program in the hospital, it is natural for employees not to have a positive perception of patient safety.

Walston (2010) states that management support is defined as management's responsibility for regulations and decision making that will affect the entire organization [23]. These regulatory aspects include three dimensions, namely safety rules and procedures, information dissemination to employees, and safety priorities among leaders. When the program has not been implemented, automatically, there are no safety regulations and procedures and official information dissemination used as

a reference. It allows the perceptions that exist in employees not to be comprehensive.

5. CONCLUSIONS

The results of the study indicate that there is no relationship between reward and punishment, management commitment, and leadership to a surprising patient safety climate because, in previous studies, it was found that patient safety climate requires management support in its success [1223,24,25,26]. The concept of patient safety that has been running in X hospital is more about the meaning that is inserted inside other programs, for example, patient safety to be a part of infection control programs limited to preventive measures. So it can be concluded that the absence of a patient safety program causes a lack of employee perception of the three management factors, which are the research variables

REFERENCES

[1] Institute of Medicine, *To Err Is Human*. Washington, DC: National Academy Press, 2000.

[2] Baker, G. R., Norton, P. G., Flintoft, V., Blais, R., Brown, A., Cox, J., Etchells, E., Ghali, W. A., Hébert, P., Majumdar, S. R., O'Beirne, M., Palacios-Derflingher, L., Reid, R. J., Sheps, S., & Tamblyn, R. (2004). The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne*, *170*(11), 1678–1686. https://doi.org/10.1503/cmaj.1040498.

[3] Kementerian Kesehatan RI. Peraturan Menteri Kesehatan Republik Indonesia Nomor 11 Tahun 2017 Tentang Keselamatan Pasien. Jakarta: Kementerian Kesehatan RI; 2017.

[4] World Health Organization, "Patient safety Global Action on Patient Safety" *World Health Organization Excecutive Boards*, 2018

[5] Nelson, Shanelle. Stone, Patricia. Jordan, Sarah. Halpin, Helen. Vanneman, Megan. Larson, Elaine. *Patient safety climate: Variation in Perception by Infection Preventionists and Quality Directors*. Hindawi Publishing Corporation. 2011

[6] World Health Organization, Human Factors in Patient Safety Review of Topics and Tools Report for Methods and Measures Working Group of WHO Patient Safety, World Health Organization, 2011.

[7] Naveh, E., Katz-Navon, T., & Stern, Z, Treatment errors in healthcare: A safety climate approach. Management Science, 51, 948-960, 2005

[8] Fleming, M, Patient Safety Culture Measurement and Improvement: A 'How to' Guide. *Health Care Quarterly*, 2005.

[9] Beus, Jeremy. Payne, Stephanie. Bergman, Mindy. Arthur, Winfred, Safety Climate and Injuries: An Examination of Theoritical and Empirical Relationships. *Journal of Applied Psychology*, 95, 2010.

[10] Depkes RI. Pedoman Nasional Keselamatan Pasien Rumah Sakit (Patient Safety). Jakarta: Depkes RI. 2008.

[11] Flin, R, *Measuring safety culture in health care: A case of accurate diagnosis*. International Journal for Quality in Health Care, 2007.

[12] Gershon, R.R.M., Karkashian, C.D., Grosch, J.W., Murphy, L.R., Cejudo, A.E., Falanagan, P.A., Bernacki, E.,Katsing, C., dan Martin, L, Hospital safety Climate and its realtionship with safe work practices and workplace exposue incidents. Journal of Association for Professionals in Infection Control and EpidemiologyInc, 2000.

[13] Singer, S., Gaba, D.M., Geppert, J.J., Sinaiko, A.D., Howard, S.K. and Park, K.C. The *culture* of *safety*: results of an organization-wide survey in 15 California Hospitals, *Quality and safety in Health Care*, 12, 112-18, 2003.

[14] Fleming, M, Patient Safety Culture Measurement andImprovement: A 'How to' Guide. *Health Care Quarterly*, 2005.

[15] Cooper, J.B., Blum, R.H., Carrol, J.S., Dershwitz, M., Feinstein, D.M., Gaba, D.M., Morey, J.C., dan Singla, A.K, Differences in safety Climate among hospital anesthesia departments and the effect of a realistic simulation-based training program. *International Anesthesia Research Society*.2008.