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Individual Characteristics and Organizational Factors Related to Patient Safety Culture at Regional General Hospital X, East Tanjung Jabung Regency in 2025

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Abstract

Introduction: *Patient safety culture is an important indicator of service quality and safety in hospitals. A low level of patient safety culture implementation may increase the risk of patient safety incidents. This study aimed to analyze individual and organizational factors associated with the implementation of patient safety culture at RSUD X, Tanjung Jabung Timur Regency.* ***Objective:*** *. The study population consisted of 340 individuals, with a sample of 198 respondents selected using proportionate stratified random sampling.* ***Method:*** *This study employed a quantitative cross-sectional design.* ***Result and Discussion****: The results showed that patient safety culture at RSUD X remained at a low level, with a mean score of 67.65. Bivariate analysis indicated significant associations between gender, employment status, and educational level with patient safety culture, as well as between leadership and management systems with patient safety culture. Multivariate analysis revealed that gender, employment status, education, leadership, training, management systems, and safety climate were associated with the implementation of patient safety culture, with education identified as the dominant factor after controlling for other variables.,* ***Conclusions:*** *: Strengthening human resource capacity and continuously improving organizational factors are necessary to enhance patient safety culture in hospitals.*

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Introduction

Hospitals are health care facilities that provide comprehensive individual health care services through promotive, preventive, curative, rehabilitative, and/or palliative health care by providing inpatient, outpatient, and emergency services (Mayasari, Munaa, Kodriyah, Herawati, & Aditya, 2020); (Marbun, Ariyanti, & Dea, 2022); (Santoso, 2024). The WHO reports that medical errors are responsible for 134 million patient incidents each year worldwide, especially in developing countries, and 2.6 million of these result in death (Nofita & Wulandari, 2025)

Data from the Hospital Patient Safety Committee (KPRS — Hospital Patient Safety Committee) reports fluctuating patient incidents in hospitals, namely 1,489 cases (2018), 7,465 cases (2019), and 4,421 cases (2021). The Ministry of Health reported that during 2023, out of 3,145 hospitals spread across 34 districts/cities in Indonesia, there were 5,710 patient safety incidents, with 5,364 classified as Unexpected Events (UE/KTD) and 346 as Sentinel Events (SE). The highest number of UE incidents was reported in March 2023, and the lowest number was reported in June 2023. The highest number of SE incidents was reported in August 2023, while the lowest number was reported in June 2023. Incident data for 2024 reached more than 6,000 cases, with Near-Miss Incidents (NMI) accounting for 40% of incidents, No-Harm Incidents (NHI) accounting for 35%, and Unexpected Events (UE) accounting for the remainder. In Jambi province, more than 300 patient incidents were reported in hospitals within a one-year period, most of which were related to medication errors, patient misidentification, and nosocomial infections (Ibnu & Solida, 2021); (Agustina, 2022); (Han, Kim, & Seo, 2020)

A study conducted by Mutmainnah et al. (2021) at the Jambi Teaching Hospital on 128 nurses found that the most prominent dimension in the high culture category was internal cooperation (69.5%) and in the moderate category was staff placement (89.8%). Research by Heningnurani and Ayuningtyas (2019) at H. Abdul Manap Regional General Hospital (RGH) in Jambi found that the strongest Patient Safety Culture (PSC) was organizational learning and continuous improvement (90.6%), and the weakest was the number of reported incidents (32.03%). Many previous studies have identified PSC in hospitals and the factors that influence it, including demographic characteristics such as age, gender, marital status, and education, as well as individual factors such as work stress and fatigue.

The Patient Safety Management System (PSMS) is a framework for managing and mitigating patient safety risks in hospitals. The PSMS works by recognizing the potential for errors and building strong defenses to ensure that these errors do not result in adverse events for patients (Komalawati & Triswandi, 2022); (Rika & Sumarwanto, 2022); (Damayanti, 2025); (Mutmainnah, Mekeama, Setia, & Syir, 2021); (Rawas & Abou Hashish, 2023)

X RGH has conducted PSC assessments in 2023 and 2024, which found that the implementation of a PSC at X RGH in Tanjung Jabung Timur District is generally still weak, with a score of 56.1% in 2023, with the highest dimension being organizational learning (77%) and the lowest dimension being incident reporting frequency (39%), while in 2024 it was 56.8%, with the highest dimension being organizational learning (76%) and the lowest dimension being staffing (41.9%). Based on the above description and data, the researcher was interested in conducting research on the implementation of PSC and its relationship with organizational factors (leadership, training, management systems, and safety climate) at X RGH in Tanjung Jabung Timur Regency.

Method

This study used a quantitative analytical sample method for a patient safety culture survey according to the HSOBKP manual from AHRQ, determined based on a response rate of at least 50% of the total hospital staff. Using a cross-sectional approach, a total of 198 respondents were obtained.

Result and Discussion

Univariate Analysis

Table 1
Frequency Distribution of Demographic Characteristics of Respondents at X Regional General Hospital, East Tanjung Jabung Regency, 2025

Variable		Number (n)	Percentage (%)
Patient Safety Culture	Low	164	82.8
	High	34	17.2
Age	Young (< 40 years)	140	70.7
	Old (≥ 40 years)	58	29.3
Gender	Male	56	28.3
	Female	142	71.7
Employment Status	Non-Civil Servant (Honorary / Contract / PTT / Internship)	106	53.5
	Fixed-Term Contract (PPPK)	20	10.1
	Civil Servant (PNS)	72	36.4
Level of Education	Low (< Higher Education)	48	24.2
	High (≥ Higher Education)	150	75.8
Length of Employment at Hospital	New (< 10 years)	96	48.5
	Long (≥ 10 years)	101	51.0
Length of Employment in Unit	New (< 10 years)	124	62.6
	Long (≥ 10 years)	73	36.9
Total			198

Source : Processed Primary Data, 2026

Based on the results of univariate analysis in the table above, it is known that the demographic characteristics of the respondents show that the majority of respondents in this study were in the young age category < 40 years, totaling 140 people (70.7%), while respondents aged ≥ 40 years numbered 58 people (29.3%). Based on gender, the majority of respondents were women, totaling 142 people (71.7%), while male respondents numbered 56 people (28.3%).

Based on employment status, the majority of respondents were non-civil servants (honorary/contract/PTT/internship) totaling 106 people (53.5%), followed by civil servants totaling 72 people (36.4%) and PPPK totaling 20 people (10.1%). Based on the highest level of education with a cut-off point of college, more respondents had a higher education, totaling 150 respondents (75.8%), while respondents with a lower education totaled 48 respondents (24.2%). Based on length of service at the hospital, 101 respondents (51.0%) had been working for ≥ 10 years, while 96 respondents (48.0%) had been working for < 10 years. Meanwhile, based on length of service in the unit, most respondents had a length of service of < 10 years, namely 124 respondents (62.6%), while respondents with a length of service of ≥ 10 years numbered 73 respondents (36.9%).

Table 2
Frequency Distribution of Respondent Organizational Characteristics at X Regional General Hospital, East Tanjung Jabung Regency, 2025

Variabel		Number (n)	Percentage (%)
Leadership	Less Effective	35	17.7
	Effective	163	82.3
Training	Never Received	89	44.9
	Ever Received	109	55.1
Management System	Less Supportive	98	49.5
	Supportive	100	50.5
Safety Climate	Less Supportive	93	47.0
	Supportive	105	53.0
Total			**198**

Source : Processed Primary Data, 2026

Based on organizational factors, most respondents considered leadership at X Regional General Hospital to be effective, namely 163 people (82.3%), while 35 respondents (17.7%) considered leadership to be ineffective. Based on the training variable, 109 respondents (55.1%) had participated in training, while 89 respondents (44.9%) had never participated in training. Furthermore, 100 respondents (50.5%) considered the management system to be supportive, while 98 respondents (49.5%) considered the management system to be less supportive. Regarding the work climate variable, more respondents assessed the safety climate as supportive, namely 105 people (53.0%), while 93 respondents (47.0%) assessed the work climate as less supportive.

Bivariate Analysis

Table 3
Results of Bivariate Analysis of Demographic Variables with Patient Safety Culture at X Regional General Hospital, Tanjung Jabung Timur Regency Year 2025

Variabel		Patient Safety Culture				PR (95% CI)	P-*value*
		Low PSC	%	High PSC	%		
Age	Young (< 40 years)	114	81.4	26	18.6	0.94 (0.83–1.08)	0.546
	Old (≥ 40 years)	50	86.2	8	13.8		
Gender	Male	53	94.6	3	5.4	1.21 (1.09–1.35)	0.010
	Female	111	78.2	31	21.8		
Employment Status	Non-Civil Servant	95	89.6	11	10.4	0.35 (0.15–0.79)	0.025
	Fixed-Term Contract (PPPK)	15	75.0	5	25.0	1.00 (0.32–3.14)	
	Civil Servant (PNS	54	75.0	18	25.0		
Level of Education	Low (< Higher Education)	47	97.9	1	2.1	1.26 (1.14–1.38)	0.003

	High (≥ Higher Education)	117	78.0	33	22.0		
Length of Employment at Hospital	New (< 10 years)	83	86.5	13	13.5	1.08 (0.95–1.22)	0.324
	Long (≥ 10 years)	81	80.2	20	19.8		
Length of Employment in Unit	New (< 10 years)	106	85.5	18	14.5	1.08 (0.94–1.23)	0.370
	Long (≥ 10 years)	58	79.5	15	20.5		

Source : Processed Primary Data, 2026

The results of bivariate analysis using the Chi-Square test showed that the variables Gender, Employment Status, and Highest level of education had a statistically significant relationship with Patient Safety Culture (P-value < 0.05). Meanwhile, the variables Age, length of stay in hospital, and length of stay in the unit did not show a statistically significant relationship with Patient Safety Culture (P-value ≥ 0.05). In the Age variable, the results of the Chi-Square test showed a PR value = 0.94 with a 95% confidence interval (CI: 0.83–1.08) and a P-value = 0.546. A P--value > 0.05 indicates that there is no statistically significant relationship between Age and Patient Safety Culture. These findings are in line with the view of Singer et al. who stated that safety culture is more influenced by organizational learning and work climate than by individual characteristics such as age or length of service.

In the Gender variable, the results of the Chi-Square test showed a PR value = 1.21 with a confidence interval of 95% (CI: 1.09–1.35) and a P-value = 0.010. These findings show that male respondents have a 1.21 times greater chance of experiencing a low Patient Safety Culture compared to female respondents. This statement is supported by research by Kim et al. (2020) also found that female health workers have higher adherence to safety procedures because they are more thorough and careful. Conditions at RSUD X, which are dominated by women (71.7%) also contribute to a better safety culture in the group. In the Employment Status variable, the results of the Chi-Square test showed a PR value = 0.35 with a 95% confidence interval (CI: 0.15–0.79) and a P-value = 0.025. indicating that the Employment Status of non-civil servants and PPK is a protective factor against low Patient Safety Culture, where respondents with non-PNS status and PPK are less likely to experience a low Patient Safety Culture compared to civil servant respondents. In other words, respondents with civil servant status have a greater chance of having a low Patient Safety Culture than non-civil servants or PPPK. The results of this study are in line with the findings of Afulani et al. (2020) which stated that non-permanent or contract health workers tend to be more compliant with safety procedures due to the pressure of performance evaluation and uncertainty of work status.

In the Highest level of education variable, the Chi-Square test results showed a PR value = 1.26 with a 95% confidence interval (CI: 1.14–1.38) and a P-value = 0.003. This shows that respondents with low education level have a 1.26 times greater chance of experiencing a low Patient Safety Culture compared to respondents with higher education. Research by Lee et al. (2021) states that healthcare workers with higher education are better able to understand clinical risks and safety standards. At RSUD X, personnel with low education are more in service support positions so that exposure to safety training is relatively lower. In the variable length of work in the hospital, the results

of the Chi-Square test showed a PR value = 1.08 with a confidence interval of 95% (CI: 0.94–1.23) and a P-value = 0.370. A P-value of > 0.05 indicates that there is no statistically significant relationship between length of service in the unit and Patient Safety Culture. These findings show that length of work, both in the hospital and in the work unit, is not significantly related to Patient Safety Culture.

Table 4
Results of Bivariate Analysis of Organizational Variables with Patient Safety Culture at RSUD X, East Tanjung Jabung Regency Year 2025

Variabel		Patient Safety Culture				PR (95% CI)	P-value
		Low PSC	%	High PSC	%		
Leadership	Less Effective	35	100.0	0	0.0	1.26 (1.17–1.37)	0.006
	Effective	129	79.1	34	20.9	Ref	
Training	Never Received	73	82.0	16	18.0	0.98 (0.86–1.12)	0.934
	Ever Received	91	83.5	18	16.5	Ref	
Management System	Less Supportive	87	88.8	11	11.2	1.15 (1.01–1.31)	0.045
	Supportive	77	77.0	23	23.0	Ref	
Safety Climate	Less Supportive	78	83.9	15	16.1	1.02 (0.90–1.16)	0.859
	Supportive	86	81.9	19	18.1	Ref	

Source: Processed Primary Data, 2026

Based on the results of a bivariate analysis of organizational variables with Patient Safety Culture at Hospital X, East Tanjung Jabung Regency in 2025, several variables were obtained that showed a statistically significant relationship, namely leadership and management system, while the variables of training and safety climate were not statistically related to Patient Safety Culture.

The leadership variable showed a significant relationship with Patient Safety Culture. In respondents with less effective leadership, all respondents, namely 35 people (100.0%) had a low Patient Safety Culture. Meanwhile, among respondents with effective leadership, as many as 129 people (79.1%) had a low Patient Safety Culture. The results showed a PR = 1.26 (95% CI: 1.17–1.37) with a P-value = 0.006, indicating that respondents with less effective leadership were 1.26 times more likely to have a low Patient Safety Culture than respondents with effective leadership.

The management system variable shows a significant relationship with Patient Safety Culture. Among respondents with a less supportive management system, as many as 87 people (88.8%) had a low Patient Safety Culture. Meanwhile, among respondents with a supportive management system, there were 77 people (77.0%) who had a low Patient Safety Culture. The results of the analysis showed a PR = 1.15 (95% CI: 1.01–1.31) with a P-value = 0.045, which showed that respondents with a less supportive management system had a 1.15 times greater chance of having a low Patient Safety Culture compared to respondents with a supportive management system.

Meanwhile, the training variable did not show a significant association with Patient Safety Culture. In respondents who had never participated in training, as many as 73 people (82.0%) had a low Patient Safety Culture, while in respondents who had

participated in the training, there were 91 people (83.5%) with a low Patient Safety Culture. The results showed a PR = 0.98 (95% CI: 0.86–1.12) with a P-value = 0.934, indicating that there was no significant difference in the chance of low Patient Safety Culture between the two respondent groups. According to Schein's (2010) theory of organizational culture, cultural change is not enough to be achieved through knowledge transfer alone, but requires systemic reinforcement, including leadership examples, integration of safety values in policies, reward systems, and daily work practices

Multivariate Analysis

Based on the results of bivariate analysis between independent variables and dependent variables for multivariate modeling selection by looking at variables that have a P-value of ≤ 0.25.

Table 5
Selection of Relationship Candidates

No	Variabel	P-value	Remarks
1.	Gender	0.010	Multivariate Candidate
2.	Employment Status	0.025	Multivariate Candidate
3.	Level of Education	0.003	Multivariate Candidate
4.	Leadership	0.006	Multivariate Candidate
5.	Training	0.934	Multivariate Candidate in substance
6.	Management System	0.045	Multivariate Candidate
7.	Safety Climate	0.859	Multivariate Candidates in Substance

Source : Processed Primary Data, 2026

Based on the results of the bivariate selection, there are 5 independent variables that produce a P-value of ≤ 0.25, namely the variables Gender, Employment Status, Highest level of education, leadership, and management system. In substance, there are also two variables that are included in the multivariate candidate, so all of these variables are included in *the multivariate analysis.* The following is the final model of multivariate analysis

Table 6
Multivariate End Model

Variabel	B	P-value	BY	95%CI	P-Value Omnibus	Nails Churches	Overall Percentage
Gender (Male)	-1.64	0.015	0.19	0.05–0.72			
Employment Status: Non-Civil Servant	-0.29	0.554	0.75	0.28–1.97			
Employment Status: Fixed-Term Contract (PPPK)	0.20	0.755	1.23	0.34–4.44			
					< 0.001	0.335	84.8%
Employment Status: Civil Servant (PNS) (ref)	–	–	Ref	–			
Level of Education	-2.82	0.011	0.06	0.01–0.53			
Leadership	-19.55	0.998	–	–			

Training	0.98	0.031	2.66	1.10–6.47
Management System	-0.78	0.116	0.46	0.17–1.21
Safety Climate	0.31	0.518	1.36	0.54–3.43

Source: Primary Data, Logistic Regression, Enter, 2026

The results of multivariate analysis using multiple logistic regression showed that the factors related to Patient Safety Culture at Hospital X in East Tanjung Jabung Regency were Gender, Employment Status, Education, Leadership, Training, Management System and Safety Climate. The variables that are significantly related to low Patient Safety Culture are Gender, Highest level of education, and training after being controlled by Employment Status, management system and safety climate.

Conclusion

The conclusions that can be drawn from this study show that the Patient Safety Culture at RSUD X is still in the low category with an average score of 67.65. Bivariate analyses showed a meaningful relationship between Gender, Employment Status and education level with Patient Safety Culture, as well as the relationship between leadership and management systems and Patient Safety Culture. Multivariate analysis showed that Gender, Employment Status, education, leadership, training, management systems, and safety climate were related to the implementation of Patient Safety Culture, with education as the dominant factor after being controlled by other variables. Strengthening the capacity of human resources and continuously improving organizational factors are needed to improve the Patient Safety Culture in hospitals.

Reference

Agustina, Nelly. (2022). *Gambaran Penyebab Insiden Keselamatan Pasien Di Rawat Inap RSUP Dr. Tadjuddin Chalid Makassar*. Universitas Hasanuddin.

Damayanti, Erin. (2025). Jaminan mutu pelayanan kesehatan dan keselamatan pasien. *Jurnal Ad Dustur*, *1*(2), 1–11.

Han, Yonghee, Kim, Ji Su, & Seo, YeJi. (2020). Cross-sectional study on patient safety culture, patient safety competency, and adverse events. *Western Journal of Nursing Research*, *42*(1), 32–40.

Ibnu, Ismi Nurwaqiah, & Solida, Adila. (2021). Predictors of hospital patient safety culture outcomes in Jambi Province. *Enfermeria Clinica*, *31*, S722–S729.

Komalawati, Veronica, & Triswandi, Erga Febrianti. (2022). Tanggung Jawab Dokter Atas Insiden Keselamatan Pasien Dalam Pelayanan Kesehatan Di Rumah Sakit Sebagai Institusi Kesehatan. *Jurnal Bina Mulia Hukum*, *6*(2), 174–186.

Marbun, Romaden, Ariyanti, Rea, & Dea, Vincensia. (2022). Peningkatan Pengetahun Masyarakat Terkait Pemahaman Alur Pelayanan Gawat Darurat Di Rumah Sakit. *Selaparang*, *6*(1), 108–113.

Mayasari, Ella, Munaa, Nihayatul, Kodriyah, Lailatul, Herawati, Ida, & Aditya, Ronal Surya. (2020). Keputusan masyarakat dalam pemilihan rumah sakit untuk pelayanan kesehatan di Wilayah Malang Raya. *Jkep*, *5*(2), 114–121.

Mutmainnah, Muthia, Mekeama, Luri, Setia, Nila Budi, & Syir, Muhammad. (2021). Analysis of Patient Safety Culture Among Nurses in Inpatient and Outpatient Care Unit Jambi Teaching Hospital. *The 3rd Green Development International Conference (GDIC 2020)*, 524–531. Atlantis Press.

Nofita, Siska Afri, & Wulandari, Cicilia Ika. (2025). Apa Faktor yang Berkontribusi Terhadap Pelaporan Insiden Keselamatan Pasien di Rumah Sakit? Systematic Review. *Jurnal Kesehatan Saelmakers PERDANA (JKSP)*, *8*(3), 439–448.

Rawas, Hawazen, & Abou Hashish, Ebtsam Aly. (2023). Predictors and outcomes of patient safety culture at King Abdulaziz Medical City, Jeddah, Saudi Arabia. A nursing perspective. *BMC Nursing*, *22*(1), 229.

Rika, Widya, & Sumarwanto, Edi. (2022). Kebijakan Keselamatan Pasien Di Rumah Sakit. *Indonesian Journal of Dentistry*, *2*(2), 17–30.

Santoso, Hari. (2024). Hak Rumah Sakit untuk Bekerjasama dengan Badan Penyelenggara Jaminan Sosial Kesehatan dalam Pelayanan Kesehatan. *Jurnal Hukum Indonesia*, *3*(1), 29–38.

Jambi Provincial Health Office. Patient Safety Incident Report at Jambi Provincial Hospital [Internet]. Jambi; 2021. Available from: https://dinkes.jambiprov.go.id/

Ministry of Health of the Republic of Indonesia. Law Number 17 of 2023. Laws and Regulations. 2023;