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# The Impact of Healthcare Worker Safety Culture on Outpatient Patient Satisfaction in Public Hospitals

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**Abstract:** Patient satisfaction and the safety culture of health workers are two important aspects that are interrelated in providing health services. Patient satisfaction measures the extent to which patients are satisfied with the services they receive from health service providers. This study analyzes the impact of safety culture and factors related to outpatient patient satisfaction. Observational research was employed with stratified random sampling, and primary data was collected from a public hospital in Samarinda City. The study included patients who had received outpatient care within the last 3 days, aged 17 years and older, and willing to complete the questionnaire. Inpatients were excluded from the sample criteria. The bivariate test was performed for chi-square, then binary logistic for multivariate. Statistical test results of the variables clarity of information, communication of health workers, physical quality, empathy, and safety culture associated with outpatient satisfaction, multivariate regression showed safety culture (OR 13.44; p 0.006) had a large influence, followed by communication (OR 12.460; p 0.023) and empathy (OR 9.947; p 0.025) on outpatient satisfaction. This research is expected to be a source of information, input, and material for preparing plans and as a basis for the initial stages of periodic evaluation of the quality of health services for patients.

**Keywords:** patient satisfaction; service quality; outpatient; public hospital

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## INTRODUCTION

Over the past two decades, patient satisfaction has garnered attention as a crucial source of information to identify gaps and serve as an effective measure for planning improvements in healthcare service quality within organizations.<sup>1</sup> The role of hospitals as healthcare facilities for patients becomes evident through research that seeks to understand why patients are not returning.<sup>2</sup> Several factors contribute to patients not revisiting a hospital: 1% due to unfortunate demise, 3% due to relocation, 5% because they find satisfaction with other companies, 9% influenced by competitor recommendations, 14% due to dissatisfaction with services or products, and a substantial 68% attributed to poor service quality.<sup>2</sup>

Patient satisfaction is the customer's response to the disparity between pre-service expectations and post-service actual performance.<sup>3</sup> Patient satisfaction, or customer satisfaction, constitutes the essence of patient-centered or customer-oriented marketing. Satisfactory and high-quality services foster patient or customer loyalty, attracting new clientele.<sup>4</sup>

National standards for patient satisfaction in healthcare services are established by the Department of Health, as outlined in the 2016 Regulation of the Republic of Indonesia's Ministry of Health on Minimal Service Standards. The target for patient satisfaction is set above 95%.<sup>4</sup> Safety culture, also known as a culture of safety, has emerged as a critical focus in current research, especially within the healthcare sector and other industries associated with safety risks.<sup>5,6</sup> The interplay between safety culture and patient satisfaction aids in finding ways to deliver improved services and meet patient needs.<sup>7</sup> By delving deeper into safety culture,

research opens avenues to raise awareness and fortify safety practices across various sectors.<sup>8</sup> This is of paramount importance in creating safer environments and mitigating preventable incidents.<sup>2,8</sup>

Understanding how these cultural factors interact with patient satisfaction in outpatient care settings within public hospitals is an area that might not have been extensively explored.<sup>9</sup> Much of the current research field on safety culture and patient satisfaction may primarily focus on the context of inpatient settings.<sup>10-12</sup> There needs to be more extensive research, especially investigating the correlation between safety culture and outpatient patient satisfaction within public hospitals. The examination of the interplay between cultural characteristics and patient satisfaction in outpatient treatment settings inside public hospitals is a topic that may have received limited research attention.<sup>4</sup>

This study aims to investigate how organizational factors, such as clarity of information, communication between health professionals, tangibles, empathy, and safety culture, affect outpatient patient satisfaction.<sup>4,13,14</sup> Investigating these research gaps could lead to a more holistic comprehension of the correlation between safety culture and patient satisfaction among outpatient services in public hospitals. Additionally, these findings could serve as a roadmap for healthcare institutions to implement well-informed enhancements to improve patient experiences and overall outcomes.

## MATERIAL AND METHOD

This study employed observational data using a survey design with primary survey data. Due to the unknown population size, the sampling technique used was non-probability, specifically consecutive. Sample size calculation was performed using the Lemeshow formula,<sup>15</sup> The inclusion criteria for this study were patients who had previously utilized/received outpatient care at I.A Moeis Hospital, outpatients who had received services within the last 3 days, patients aged 17 years and older, and outpatients willing to complete the questionnaire. Inpatients were not included in the sample criteria for this study, resulting in a total of 72 individuals.

The patient satisfaction section consisted of eighteen questions adapted from the Patient Satisfaction Questionnaire-18 (PSQ-18), serving as an instrument to assess patient satisfaction with healthcare facility services.<sup>16</sup> PSQ-18 comprises eighteen questions distributed across seven question scales: overall patient satisfaction (2 questions), technical service quality (4 questions), interpersonal attitude (2 questions), communication (2 questions), financial aspects (2 questions), time spent with healthcare providers (2 questions), and access and comfort (4 questions). Respondents used a Likert Scale ranging from 1 to 5, where 1 represents "strongly agree" and 5 represents "strongly disagree." Scores from these seven categories were averaged to form a new scale called "Overall Patient Satisfaction," enabling analysis to encompass all scales. The questionnaires were based on the SERVQUAL scale modified to suit the study.<sup>17</sup> These dimensions were decomposed into charity, communication, tangibility, empathy, and safety culture. The clarity of information section encompasses information in healthcare services concerning service flow, administration, and patient information. It consists of eight questions adopted from the research using the Guttman scale. These are categorized into two groups: values greater than 6 are considered good, and vice versa. The Communication variable includes nine questions related to the delivery or transfer of messages in the form of information from doctors and nurses to outpatient patients. It is also categorized into two groups: values greater than 12 are categorized as good, and vice versa.

The Physical Quality section contains six questions about the tangible aspects of service that are directly observable in the care provided by service providers. It includes physical facilities such as the building, equipment, and appearance of healthcare staff. It uses the Guttman scale and is categorized into two groups: values greater than 6 are considered good, and vice versa. The Empathy dimension consists of five questions related to affection or intellectual understanding of emotional states and the behavioral attitude of healthcare providers to listen, understand, and pay attention to patients. It is categorized using the Guttman scale, with values greater than 8 categorized as empathetic and vice versa. Safety culture focuses on people's perceptions of how much an organization values safety (for workers, patients, and the environment), resources for safety initiatives, and safety-related equipment. The Guttman scale, containing eight questions, categorizes values greater than 12 as good and vice versa.

Data collection for this study was conducted using a questionnaire, and bivariate analysis was performed using the chi-square test. Furthermore, binary logistic regression was conducted to examine the effects between variables. A 95% confidence interval (CI) was used, and the p-value was considered significant if  $<0.05$ .

## RESULT

The participants in this study were outpatients who had received services at a public hospital in Samarinda City. As shown in Table 1, the distribution of socio-demographic characteristics of study subjects stratified by patient satisfaction.

Table 1. Characteristic of informants

		Patient Satisfaction				Total	
		Dissatisfaction		Satisfaction		N	%
		N	%	N	%		
Gender	Male	5	17.2%	24	82.8%	29	100
	Female	5	11.6%	38	88.4%	43	100
Education	Elementary	1	33.3%	2	66.7%	3	100
	Middle school	0	0.0%	8	100.0%	8	100
	High school	6	11.5%	46	88.5%	52	100
	Diploma	3	33.3%	6	66.7%	9	100
Occupation	Private employee	4	13.8%	25	86.2%	29	100
	Domestic worker	4	16.7%	20	83.3%	24	100
	Farmer	1	20.0%	4	80.0%	5	100
	Teacher	1	100.0%	0	0.0%	1	100
	Midwifery	0	0.0%	1	100.0%	1	100
	College student	0	0.0%	2	100.0%	2	100
	Student of high school	0	0.0%	6	100.0%	6	100
	Peddler	0	0.0%	3	100.0%	3	100
	Businessman	0	0.0%	1	100.0%	1	100
	Clarity of information	Bad	4	36.4%	7	63.6%	11
Good		6	9.8%	55	90.2%	61	100
Communication	Bad	5	55.6%	4	44.4%	9	100
	Good	5	7.9%	58	92.1%	63	100
Tangible	Bad	4	57.1%	3	42.9%	7	100
	Good	6	9.2%	59	90.8%	65	100
Empathy	Bad	7	53.8%	6	46.2%	13	100
	Good	3	5.1%	56	94.9%	59	100
Safety Culture	Bad	3	60.0%	2	40.0%	5	100
	Good	7	10.4%	60	89.6%	67	100

Based on Table 1, it is observed that the characteristics of gender indicate that 38 female respondents are satisfied with the provided services (88.4%) and 24 male respondents are satisfied with the provided services (82.8%).

The level of patient satisfaction based on education showed that all respondents with the latest Junior High School education level expressed satisfaction, totaling 8 respondents (100%). Most respondents expressed satisfaction in the category of education levels of High School, Vocational High School, and Islamic High School, totaling 46 respondents (88.5%). In the group with a diploma or bachelor's degree, there were 6 respondents (66.7%) who expressed satisfaction, and in the High School, there were 46 respondents (88.5%) who expressed satisfaction.

In the occupation category, respondents with the occupations of midwife, college student, student, trader, and entrepreneur all expressed 100% satisfaction. In the private employee category, 25 respondents (86.2%) expressed satisfaction. Among the housewife category, 20 respondents (83.3%) expressed satisfaction. In the farmer category, 4 respondents (80.0%) expressed satisfaction.

Regarding the clarity of information variable, 55 respondents (90.2%) indicated good clarity of information and expressed satisfaction. In terms of healthcare provider communication, 58 respondents (92.1%) stated that the communication from healthcare providers was good and that they were satisfied. For the physical quality variable, 59 respondents (90.8%) mentioned that the physical quality of healthcare services was good and they were satisfied. In the empathy variable, 56 respondents (94.9%) expressed that

the empathy displayed was good and they were satisfied. Lastly, in the safety culture variable, 60 respondents (89.6%) stated that the safety culture was good and that they were satisfied.

Table 2. Distribution of Clarity of Information, Communication, Tangibility, Empathy, Safety Culture Factors Associated Stratified by Patient Satisfaction

Variable		Patient Satisfaction				P-value
		Dissatisfaction		Dissatisfaction		
		n	%	n	%	
Clarity of information	Bad	4	36.4	6	9.8	0.040**
	Good	7	63.6	55	90.2	
Communication	Bad	5	55.6	4	44.4	0.002**
	Good	5	7.9	58	92.1	
Tangibility	Bad	4	57.1	6	9.2	0.006***
	Good	3	42.9	59	90.8	
Empathy	Bad	7	70	6	9.7	0.000***
	Good	3	30	56	90.3	
Safety Culture	Bad	3	30	2	3.2	0.017**
	Good	7	70	60	96.8	

Note: \*, \*\*, and \*\*\* denote significance at 10%, 5%, and 1% levels.

Based on Table 2, it can be concluded that all variables are associated with outpatient patient satisfaction at I.A Moeis Hospital in Samarinda City. For the clarity of information variable, it is evident that there is a relationship with a p-value of (0.040 < 0.05). In the healthcare provider communication variable, the chi-square test result showed a relationship with a p-value of (0.002 < 0.05). Similarly, the chi-square test result indicated a relationship with a p-value of (0.006 < 0.05) for the physical quality variable. The empathy variable's chi-square test result also suggested a relationship with a p-value of (0.000 < 0.05). Moreover, the healthcare provider communication variable had a relationship with a p-value of (0.0017 < 0.05).

These relationships indicated that good clarity of information, healthcare provider communication, physical quality, empathy, and safety culture can lead to positive outcomes, enhancing patient assessment of the staff and increasing patient satisfaction with healthcare services.

The R Square value is observed to understand how much the independent variables can explain and influence the dependent variable. The obtained R Square value indicated that the influence of the clarity of information, communication, physical quality, empathy, and safety culture variables on outpatient patient satisfaction was 56.2%.

Based on the Hosmer and Lemeshow test, a significance value of 0.096 was obtained, greater than 0.05. Therefore, it can be inferred that the logistic regression model used can explain the data or be considered adequate.

Table 3. Logistic regression analysis of factors influencing patient satisfaction

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Communication	2.523**	1.113	5.139	1	0.023	12.460	1.407	110.323
Empathy	2.297**	1.023	5.046	1	0.025	9.947	1.340	73.834
Safety culture	3.498***	1.279	7.475	1	0.006	13.044	2.692	179.629
R Square	0.562							

Note: \*, \*\*, and \*\*\* denote significance at 10%, 5%, and 1% levels.

The table presented above demonstrates the statistical significance of several variables. Specifically, the communication variable exhibits significance with a value of a OR 12.460 and a 95% confidence interval of 1.407-110.323. Similarly, empathy shows significance with a value of a OR 9.947 and a 95% confidence interval of 1.340-73.834. Lastly, safety culture is also significant, with a value of a OR 13.044 and a 95% confidence interval of 2.692-179.629. This assertion is substantiated by the proposition that enhanced communication among healthcare professionals, empathy, and a culture of safety correlate positively with heightened levels of patient satisfaction. The multivariate test did not include the factors of tangible and clarity of information. This assertion is substantiated by the proposition that enhanced communication among healthcare



professionals, empathy, and a culture of safety correlate positively with heightened levels of patient satisfaction.

## DISCUSSION

Patient satisfaction in hospitals is an important factor in assessing the quality of healthcare services.<sup>3</sup> Patient satisfaction can influence the image and reputation of the hospital, as well as patients' decisions to return to the same hospital or recommend it to others.<sup>18</sup> This study aligns with the factors influencing patient satisfaction, including healthcare provider communication, clarity of information, and a strong safety culture. Efforts to fulfill these factors can enhance patient satisfaction and their experience receiving outpatient healthcare services.<sup>19</sup>

Data from research conducted at Public Hospital I.A Moeis in Samarinda City showed that most patients have expressed that healthcare provider communication, empathy, and safety culture are already good. Additionally, it was found that more patients feel satisfied. Therefore, it is known that there is a relationship between factors related to patient satisfaction in outpatient care at Hospital I.A Moeis in Samarinda City.

This study also aligns with Lee et al.'s research that indicates a correlation between healthcare provider communication and outpatient patient satisfaction.<sup>20</sup> It demonstrated that the better healthcare providers communicate, the more satisfied outpatient patients will be.<sup>20</sup> Healthcare providers must engage in clear and informative communication with patients so that patients can have a good understanding of their condition.<sup>21</sup>

The empathy exhibited by medical personnel is of utmost importance in enhancing patient satisfaction.<sup>22</sup> Healthcare workers exhibit empathy when they display comprehension, sympathy, and authentic regard for the welfare of their patients.<sup>23</sup> Establishing a happy and supportive environment fosters an enhanced patient experience.<sup>23</sup> Empathic interactions have been found to contribute to patients' increased comfort, sense of value, and perception of being heard, ultimately leading to heightened satisfaction with the healthcare services they are provided.<sup>24</sup> When patients perceive that their emotional needs are being acknowledged and that healthcare personnel are responsive to their concerns, it can result in elevated levels of trust and confidence in the healthcare services rendered.<sup>24</sup> The correlation between the level of empathy displayed by medical staff and patient happiness can enhance overall healthcare results and foster patient loyalty towards the healthcare institution.<sup>25</sup>

Furthermore, the culture of patient safety substantially affects patient satisfaction within the realm of healthcare services.<sup>26</sup> The concept of patient safety culture encompasses the shared attitudes, beliefs, and actions exhibited by healthcare personnel and organizations about the safety of patients.<sup>27</sup> A robust patient safety culture signifies a collective dedication to safeguarding the welfare and security of patients throughout their healthcare trajectory.<sup>27</sup>

The management of patient safety, encompassing the implementation of various processes, protocols, and practices aimed at preventing errors and adverse events, constitutes a fundamental element of fostering a culture of patient safety.<sup>28</sup> The prioritization of patient safety management by healthcare organizations has the potential to decrease instances of medical errors, preventable complications, and adverse events.<sup>28</sup> Patients with a heightened perception of safety and an active approach toward error prevention are more inclined to experience satisfaction with their care.<sup>10</sup>

There exists a significant interconnection between patient safety culture and patient satisfaction.<sup>29</sup> Patients who perceive that their safety is given priority and that the healthcare facility has a robust safety culture are inclined to place greater trust in their care.<sup>5</sup> The establishment of trust can significantly enhance individuals' overall satisfaction with their healthcare experience.<sup>3</sup> Moreover, emphasizing patient safety can enhance communication, increase transparency, and improve teamwork among healthcare professionals, significantly contributing to patient satisfaction.<sup>4</sup>

Investigating patient safety culture in various nations highlights the significance of this factor in influencing patient experiences and satisfaction. Enhancing the culture of patient safety yields improved patient outcomes and contributes to the overall enhancement of healthcare service quality.<sup>13</sup> The findings of this study demonstrated that the communication, empathy, and safety cultures significantly impacted patient satisfaction. The effects appear comparable to several current pharmacological therapies for the addressed illnesses.<sup>26</sup> To improve how we utilize this knowledge, we must determine the most successful and cost-efficient methods of providing sympathetic and positive communication training.<sup>30</sup> Guidi and



Traversa provided this review to shed light on the diverse and discussed definitions and conceptions of empathy in the field of medicine.<sup>31</sup> They investigated the constraints of Western mainstream medical culture before delving into the origins of the phenomenon like dehumanizing and detached concern, as well as the implications for patient care, in this study.<sup>31</sup> They then thoroughly reviewed the clinical empathy issue and its classification in the medical world.<sup>31</sup> They emphasize the dichotomous idea of clinical empathy, defined in the dispute between cognitive and affective empathy.<sup>31</sup> Patient-reported physician empathy substantially increased patient satisfaction and compliance through mediating attributes, including exchange of information, perceived knowledge, interpersonal trust, and teamwork.<sup>30</sup> Improved empathetic communication skills among practitioners should improve patient satisfaction and compliance.<sup>31</sup> Healthcare practitioners who want to increase patient satisfaction and compliance should first identify areas of empathic communication that need to be addressed and then work to polish their skills to assist patients better.<sup>31</sup> According to Afshar, Karbasi, and Moghadam study, evaluating the safety culture of patients in hospitals can clarify the status of the center's safety culture and its strengths and weaknesses for managers and supervisors, as well as can improve conditions for patients through improving employee awareness of patient safety.<sup>29</sup>

## CONCLUSION

There were positively significant effects of communication, empathy, and safety culture on the level of outpatient patient satisfaction. The findings of this study might provide valuable understanding regarding the association between the safety culture among healthcare workers and the patient's overall experience. Consequently, these insights may facilitate the development of strategies and interventions that target enhancing patient satisfaction and safety protocols within healthcare environments.

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## CONFLICT OF INTEREST

The contributors state that they do not possess any conflicts of interest.

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