ICASH-A050

PATIENTS SAFETY CULTURE DEVELOPMENT IN JAMBI PUBLIC HOSPITAL

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ABSTRACT

Background: *Patient safety is a serious issue in a healthcare organization. Building a patient safety culture is the first step in the improvement of safety. As patient safety culture is an inherent component of organizational culture; therefore, a study of organizational culture is required to develop it. This study aims to analyze the patient safety culture and identify the profile of the organizational culture in the hospital to find strategies to improve the patient safety culture.*

Methods: *This study was used the quantitative study using a cross-sectional research method, followed by a qualitative method to get descriptive information. This research conducted in Jambi Public Hospital, Indonesia with 128 respondents. Data were obtained from a survey by the HSOPSC (Hospital Survey on Patient Safety Culture) questionnaire and OCAI (Organizational Culture Assessment Instrument. Focus Group Discussion was conducted to identify obstacles and expectations in the implementation of patient safety culture.*

Results: *The highest positive perceptions are organizational learning and continuous improvement (90.6%) and teamwork within units (78.91%). While "staffing" (39.25) and "non-punitive responses to errors" (38.54 %) are the weakest dimension of patient safety. The most dominant type of organizational culture, followed by a hierarchy with a minimal score difference. This cultural assessment serves as a guide for changes with a quality strategy of clan culture and hierarchy culture were decided in the development of patients safety culture in this hospital.*

Conclusion*: The patient safety culture belongs to the moderate culture category, the reporting culture dimension is the weakest. A management's commitment and staff empowerment, as well as system development, are all needed on the development of a patient safety culture. Further research is required to investigate various factors to develop the reporting culture.*

Keywords: *Patient Safety Culture, Organizational Culture, Hospital*

INTRODUCTION

According to WHO publication, 1 out of 10 patients were harmed during treatment; there were approximately 43 million incidents of patient safety and costs incurred because medication errors were estimated at USD 42 billion annually related on unsafe care [1] Patient safety culture is an important factor in the effort to reduce adverse events in the hospital and improve patient safety[2]. Improvement in patient safety culture was related to a decrease in the occurrence of adverse events. Developing a culture of safety is a core element of many efforts to improve patient safety and care quality [3].

Building a safety culture is the first step in a patient safety program [4]. As an aspect of organizational culture, safety culture must be built, implemented, monitored, and continuously evaluated. Therefore the fewer dimensions in the assessment the factors and that influence it must immediately be sought for and efforts to overcome them [5]. Establishing a strong safety and learning culture requires deep involvement with the unique overall culture of certain organizations and subunits. Parker et al. (2006) state that safety culture is influenced by organizational change, such as changes in leadership or on new systems and processes. This shows that safety culture is influenced by systems, processes, and practices within the organization [6].

There has never been a survey taken on patient safety culture in Jambi Public hospital, despite being the accredited and the secondary referral hospital. The common lack of patient safety report, issue of reporting patient safety that shows results that are far from the actual conditions , rendered incapable of being a learning process for countinous improvement. This matter indicates a reflection of how patient safety culture is applied. This indicates the lack of implementation of the patient safety culture at the hospital. The result of this study is expected to be input for the local governments and hospital management to improve hospital service quality

This study aims to describe the implementation of the patient safety culture and describe the organizational culture profile and establish strategic steps to develop a patient safety culture in Jambi Public Hospital.

METHODS

This research is cross-sectional research with the quantitative method, followed by a qualitative method. The first stage was quantitative research. Measurement of patient safety culture using the HOPSC questionnaire from the AHRQ (2018) and measurement of organizational culture using the OCAI questionnaire. The nursing staff is chosen because of the longest contact time with patients, and the number is the most among other clinical staff. The number of samples was determined based on the Slovin formula and obtained the number of 128 people who were divided based on stratified random sampling. Inclusion criteria: nursing staff has worked in this hospital for more than one year. Staf on the training or leave were excluded. Descriptive analysis and Pearsons correlation test among dimension of the patient safety culture was taken using SPPS 20.

In the second stage, Qualitative research was conducted by Focus Group Discussion (FGD) and CDMG. Key informants were chosen by purposive sampling. FGD was carried out by informants: head of the nursing section and coordinator nursing staff on the outpatient, emergency room, operating room, Intensive Care Unit, and inpatient ward. In that forum, they discussed their view about the results of the survey, obstacles, and their opinions on how to build a culture of safety among nurses. In the next stage, CDMG was carried out with management, namely the director and the heads of fields as informants. It is conducted to discuss the result of the survey and result of FGD and strategic decision to build a patient safety culture among nurses in Jambi Public Hospital.

This research was carried out after approval from the director of H Abdul Manap Hospital dated December 1st,2018 by the number of letter 800/1901/TU.2/RSUD.HAM/XII/2018. Informed consent was offered to all respondents and informants before involved their participation.

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(No. 4, 2019)
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RESULTS

Assessment of Patient Safety Culture

It was found that the positive perception of patient safety culture among nurses in the range 32.3 – 90. 6%. The dimensions with the highest positive perceptions are organizational learning and continuous improvement (90.6%) and teamwork within units (78.91%). Meanwhile, the lowest dimensions that need to be intervened are the frequency of events reported (39.32%), number of events reported (32.03%), non-punitive response to errors (38.54%) and staffing (39.26%).

Fig.1 Composites positive responses of patiens safety culture among nurses at Jambi Public Hospital, 2019
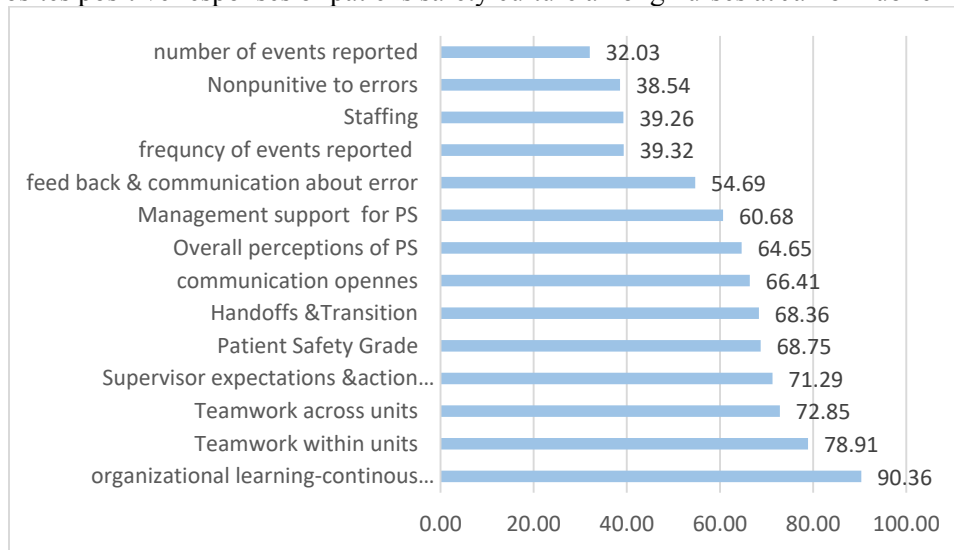
From the correlation analysis between the dimensions that exist in the patient's safety culture, it is found that: these dimensions are significantly related to each other.

Tabel 1. Correlations among composites of Patien safety culture at Jambi Public Hospital , 2019

	TWU	CO	TAU	OP	MS	FB	NPR	HO	OL	SE	FER	STF
TWU	1	.233**	0.165	0.168	0.051	.177*	0.04	0.086	.203*	.229**	0.139	0.049
CO		1	0.163	.195*	.365**	.565**	0.167	0.056	.210*	.484**	.290**	0.013
TAU			1	.189*	.317**	.230**	.203*	.328**	.210*	.352**	0.116	0.116
OP				1	.318**	0.003	0.138	0.032	.265**	.264**	0.103	0.125
MS					1	.211*	.235**	.203*	.285**	.336**	.222*	-0.101
FB						1	0.125	-0.015	0.078	.379**	.323**	-0.084
NPR							1	.183*	.193*	.276**	-0.015	0.078
HO								1	-0.02	.220*	.298**	.366**
OL									1	.258**	0.039	0.167
SE										1	0.051	0.091
FER											1	0.021

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(No. 4, 2019)
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*. Correlation is significant at the 0.05 level (2-tailed).   **. Correlation is significant at the 0.01 level (2-tailed).

TWU : Team work within Unit	NPR : Nonpunitive Respon to Errors
TAU : Teamwork Acrros Units	HO: Handoffs &Transitions
OC : Communication Oppeness	OL :Organizational Learning-Contimous Improvement
OP : Overall Perception about patien safety	SE: Supervisor Expectation &Action Promoting PS
MS : management support	FER : Frequency of Events Reported
FB : Feedback and Communication about error	STF : Staffing

Assessment of Organizational Culture

Results of this study were interpreted based on the competing values framework. Profiles can be described by setting organizational characteristics that are measured based on six components as follow: dominant characteristics, organizational leadership, employee management, organizational glue, strategic emphasis, and criteria of success [7]. The dominant type of organizational culture is defined by the quadrant with the highest average score. The strength of the dominant culture is determined based on the absolute value of the culture type and is considered significant if the value difference between the quadrants is more than 10 points [7].

Table. 2. The Organizational Type of Jambi Public Hospital, 2019

Organizational Culture type	Now	Preferred	Difference
Clan Culture	31	36	5
Adhocracy Culture	18	20	2
Market Culture	21	18	-3
Hierarchy Culture	30	26	-4

Based on these results   (tabel2), the highest score of organizational culture is Clan culture (31 points) and hierarchy culture (30 points).It means that the dominant organizational cultures are Clan and Hierarchy, which is an emphasis on the culture characterized by family and employee participation as well as being strong in controlling and formal procedure. While the weakest culture is in the adhocracy culture (18 points) and market culture (21 points). The score difference between each type of organizational culture does not reach 10 points, indicate a variety of different types of culture in Jambi Public Hospital.

Table. 3. The Score of Each Component of Organizational Culture

	Dominant Characteristic			Organizational Leadership			Management of Employees			Organizational Glue			Strategic emphasis			Criteria for success		
OC type	n	p	d	p	n	d	n	p	d	n	p	d	n	p	d	n	p	d

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	Dominant Characteristic			Organizational Leadership			Management of Employees			Organizational Glue			Strategic emphasis			Criteria for success		
Clan	31	34	3	32	36	5	35	40	5	29	32	3	28	36	9	31	37	6
Adhocracy	18	17	-1	17	18	1	18	20	2	18	22	4	18	20	1	20	21	1
Market	23	20	-3	23	21	-2	20	16	-4	21	18	-3	22	20	-2	21	16	-5
Hierarchy	28	29	1	28	24	-3	27	25	-2	32	28	-4	32	25	-8	27	26	-1

n: Now   p : Preferred   d: difference

Clan Culture is a dominant culture but not a strong culture. This can be seen from the difference with the hierarchical culture that only 1 adheres to a considerable difference (more than 10 points), with the adhocracy culture that is equal to 11 points. By comparing the responses of each quadrant and their effects to dimensions, it can be seen that the Clan Culture (31) + Culture Hierarchy (30) versus the Adhocracy Culture (18) + Market Culture (21) = 61 vs 39 which means this organization focuses on internal environment and integration and lacking in terms of external organization and differentiation. Moreover, the comparison between Clan Culture (31) + Adhocracy culture (18) versus Hierarchy culture(30) + Market Culture (21) = 49 vs. 51, shows that this organization has the equal stability and control about flexibility and freedom.

The score difference of the "Current" Clan and "Expected" Clan was less than 10 points. In general, there is not required immediate intervention. However, when viewed further, in some components there were significant changes ten points or more due to the increase in scores on Clan culture and a decrease in scores on hierarchy culture (see Table 3).

Focus Group Discussion Results
The results of a survey of patient safety culture and organizational culture in the nursing staff were presented, and also discussed barriers to the implementation of a patient safety culture among nurses and their opinion and expectation how to develop itself. The existing barriers include
   a) many staff have not known a patient safety program in detail, they did not know about the errors must be reported and its reporting system;
   b) some of the staff are worry to report errors errors due to fear of incompentence disciplinary;
   c) there are obstacles in communication so that what is perceived by management cannot be properly captured by staff resulting in an assumption that complaints lack feedback and lack of management support; and
   d) lack number of staff and placements that were not by the competence.
  While the employees' expectations for the management include :
   1) a clear management's commitment to patient safety;
   2) becoming a role model for staff;
   3) willing to hear input from and involving the staff;
   4) a clear SOP (Standart Operating Procedure) for patient safety;
   5) conducting patient safety program training.

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Consensus Decision Making Group Results

This fact was even carried out discussed the results of the patient safety culture measurements, the profile of the organization's culture, the results of the FGD to make decisions and that would be agreed to be an action plan. In accordance with the results of the organizational culture assessment, it was agreed that for the short term it would intervene in the dimensions of a safety culture based on quality strategies of the Clan culture, such as empowerment, team building, employee involvement, human resource development, open communication. In the other hand, on several dimensions, it will be accompanied by quality strategies of Hierarchy cultural such as error detection, measurement, process control, systematic problem solving, applying quality tools. However, it will strengthen more toward Clan culture approach in the future

The strategic steps agreed upon in the Consensus Decision Making Group including:
   a) Sharing vision that patient safety is one priority of the Hospital's vision and mission. by: promotion of Hospital Patient Safety programs, re-socialization and patient safety training;
   b) Supporting communication openness with management and among professions, facilitating communication through social media in hospitals;
   c) Demonstrating a clear commitment to patient safety by activating the Executive Walk around, providing feedback about occurred incidents, learning gained through reactivating clinical audits and carrying out safety standards facilitative supervision;
   d) Establishing an electronic reporting system;
   e) Involving the staff and support employee participation by selecting champion in each unit;
   f) Creating a condusive work climate to the patient safety and developing a non-blaming culture;
   g) Reviewing and analyzing of workload.

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DISCUSSION

Patient Safety Culture Survey become one of the elements of assessment that must be implemented by the hospital management as an effort to build and develop a culture of patient safety in the hospital [8]. The study found that the highest dimensions of value were organizational learning and continuous improvement and 'Teamwork within Unit'. The fewer dimensions are Staffing and Non-punitive responses, this is similar to the 2018 AHRQ report [9]. However, there are other low dimensions, namely the frequency of events reported and the number of reported events. However, there are other low dimensions, namely the frequency of events reported and the number of reported events. On the other hand, in this study, it was found that there was a relationship between perceptions in one dimension and another on several dimensions of patient safety culture (tabel 1). So that it is believed that the same approach can be done to improve the interrelated dimensions, it is hoped that the interventions carried out not only have an impact on one dimension but have an impact on the other dimensions.

There are 2 dominant cultures with almost the same strength, namely, Clan and Hierarchy. This can be understood that clan culture is in line with the nature of health services that show compassion and kinship. In the other hand, health service organizations are high-reliability organizations that demand accuracy, assuming a suitable culture is a hierarchical culture where there are control and strict enforcement of rules.

At first, recruitment of workers was taken from the primary health care without specific examination or selection but was appointed by the Health office based on the wishes of the employees, as well as emotional closeness with the initial leaders. This finding underlies that the existing familial nature has increasingly developed in hospitals in those few years. However, in the following year, the hospital must go on accreditation and force by government bureaucracy beside the status of the hospital change into a Regional Public Service Body requires the organization of hospitals full of formal, efficient and controlled processes.

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These factors influence the change of culture resulting in two cultures with almost the same strength, Clan, and Hierarchy. This is in line with the findings that the dominant culture in primary health facilities is Clan culture, whereas most public hospitals were hierarchy [10]. On the other hand, the enactment of the National Health Insurance system, with different financing patterns that prioritize cost and quality control, which requires efficiency to survive.

Some studies have found that some aspects of organizational culture are generally closely related to safety culture and play an important role in patient safety [11][12]. Studies from various literature found that Clan Culture has a positive relationship with patient safety. Clan culture is considered as a type of organizational culture that is conducive to the development of patient safety. Clan culture is strongly related to the high climate of safety[10][11][12] , in contrast with the hierarchical culture is related to the low climate of safety [11][12][13]. Research in Pakistan found that Clan and adhocracy culture has a significant positive relationship with optimistic perceptions of leadership, whereas Hierarchical (bureaucratic) culture is a significant negative correlation. Leadership response to more accepting suggestions to improve service quality, strengthen information analysis processes and encourage appreciation and recognition for employees, this indicates that a participatory and open culture, increasing staff insight into organizational improvement and employee satisfaction [14], Clan culture is positively related to the perceived satisfaction of doctors and the other health practitioner [15], job satisfaction of nurse and shows the strongest negative relationship with nurse turnover intentions [16].

Although in the preferred culture there is generally no significant change in score in each type of culture, when seen from each of the components there are significant differences (10 points) between components of Clan culture and Hierarchy culture, such as organizational leadership, employee management, and strategic emphasis and criteria of success. By these changes, the preferred culture will be congruent in which the six components are Clan culture. This movement shows the desire to strengthen the clan culture. Clan culture is an organizational culture type with a resemblance to the characteristic of a family. The leader acts as a mentor and facilitator, and perhaps even a parent. The working environment contributes to management through teamwork, human resource development. The organization functions based on loyalty and high commitment [7]. These results are in line with the staff's expectations of the leadership's commitment to being a protector, and role model and facilitator, and management emphasize openness, respect for participation, employee commitment, teamwork, and human resource development to develop a patient safety culture.

This result underlies the management's agreement that in the short term, will improve patient safety culture with approaches based on quality strategies of Clan Culture and Hierarchical culture. However, in the long run, after this transition period has passed, as their expected that the pressure of various regulatory and efficiency can be adapted and not become obstacles, it will be in harmony and togetherness.

Limitations in the study: the questionnaire employed was the English translation of HSOPC and OCAI Questionnaire. The questionnaire language transfer result had been tested for its validity and reliability. For questions with invalid test results, the researcher has made alterations or modifications in wording changes. And prior the implementation, explaining it to the entire respondents to obtain their understanding as well as assisting them when filling

CONCLUSION
In general, the Patient Safety Culture in this hospital is on moderate level. The reporting issue culture becomes the weakest culture. A management's commitment to the patient safety program is required for the development of a patient safety culture through exemplary, empowering staff and developing human

resources by patient safety training and the application of controlled and measurable procedure standards as well as improving the reporting system. Further research is expected to investigate various factors to develop a reporting culture.

ACKNOWLEDGMENT

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