

The Influence of Job Satisfaction on Patient Safety Culture in Makassar Hospitals

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ABSTRACT

Patient safety culture is a product of individual values, attitudes, and groups behavior that reflects organizational commitment to implement patient safety programs. Build patient safety culture is influenced by three organizational aspects, such as an environmental structure, processes in the organization, and an individual perception and behavior. The perception of employees about their job satisfaction is one of main factors to build commitment of patient safety culture. The purpose of this study is to analyze the relationship between employee satisfaction levels with a patient safety culture in Makassar hospitals. This research is a quantitative study with cross sectional study design. The data was collected through online questionnaire. The total of 474 employees of three hospitals in Makassar city involved in this study Descriptive analysis was used to describe the demographic characteristics of respondents, hospital characteristics, job satisfaction and maturity level of patient safety culture. To examine the influence of the job satisfaction in predicting the patient safety culture, multiple linear regression analysis was used. Results of the regression analysis showed variabels of job satisfaction explained 12.2% of patient safety culture variance. The result of the study showed that the job satisfaction ($p=0.000 < 0.05$) statistically significantly influence patient safety culture. Among job satisfaction dimensions, work environment and management relationship had a significant effect on patient safety culture.

Keywords: Job Satisfaction, Patient Safety Culture

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BACKGROUND

Patient safety is one of main indicators of the quality of health services (Okafor CH, Ugwu AC 2018). The Institute of Medicine (IOM) defines patient safety as an effort to prevent harm to patients. In the context of the health care system, patient safety includes efforts to prevent mistakes, learn from mistakes that occur and build a safety culture that involves all components of the hospital and patients (Okafor CH, Ugwu AC 2018; Clancy CM, Farquhar MB 2005). Therefore, building a patient safety culture is also a part of building an organizational culture.

Organizational culture is a pattern of organizational beliefs and values that are imbued and practiced by the organization, so that becomes the basis for the rules of behavior in the organization. In general, organizational culture is formed by individuals in the organization, which then shape the culture in the team into an organizational culture. However, related to patient safety culture, to create patient safety culture as a part of organizational culture, transformation and commitment from all hospital components required.

Building a patient safety culture results from the effective interaction of three organizational elements, namely environmental structures and processes within the organization, employee attitudes and perceptions, and individual behavior. This shows that the human factor (individual) is an important factor for the success of patient safety culture in the hospital. From the perspective of organizational behavior science, each individual has a different level of satisfaction based on the prevailing value system within him. The more aspects of work and environment that match individual interests or expectations, the higher the level of satisfaction he feels and vice versa (Natsir, 2015). Building a patient safety culture requires an individual willingness to change values and mindsets in working in accordance with patient safety standards. The importance of an individual commitment

to implementing patient safety standards facilitates the formation of a patient safety culture at the organizational level.

In 2019, Wang, Chou and Lai conducted a study that showed job satisfaction was considered the most important factor affecting patient safety, especially in forming positive team performance. (Wang, Chou and Lai, 2019). Another study in Iran on patient safety culture found that there is a significant relationship between employee job satisfaction and patient safety culture (Ooshaksaraie et al. 2016). In developing countries, a few studies conducted regarding job satisfaction and patient safety culture. Several studies related to patient safety culture focus more on organizational factors and patient perspective. This study aims to analyze the influence of job satisfaction on patient safety culture.

METHOD

The research was quantitative with cross sectional design conducted in 3 hospitals in the city of Makassar. The study was conducted on June-October 2020. Medical personnel, paramedics and supporting staff in accredited hospitals were respondents inclusion criteria. The sample was selected based on purposive sampling, in Haji General Hospital, Hasanuddin University Hospital Makassar and Awal Bros Hospital Makassar. Each of these hospitals is a representative of the provincial-owned hospital, the Ministry of Education and Culture's and the private sector. The sample size is determined according to the number of employees in the hospital. The sample size was determined using the Isaac & Michael formula. A total of 1,175 employees in three hospitals consisting of medical personnel, paramedics and medical assistants in the hospital (doctors, nurses, pharmacists) were involved as the study population. The total sample of 575 employees who received the questionnaire, 474 successfully filled out the questionnaire (response rate 82%).

This study analyzed 5 variables consisting of 4 independent variables, namely job characteristics, rewards, work environment, relationship with supervisors and 1 dependent variable, namely patient safety culture. Data analysis in this study used a comparative analysis method using the SPSS program. The validity and reliability tests were tested on 41 respondents at the Poso Regional General Hospital, Central Sulawesi. Data analysis used descriptive analysis to see the demographic characteristics of respondents, hospital characteristics, job satisfaction levels based on variables and the level of patient safety culture. To examine the influence of the independent variables in predicting the

dependent variable, multiple linear regression analysis was used.

RESULTS

Based on the demographic findings (table 1), the total respondents from the three hospitals were 474 respondents consisting of 192 Awal Bros Hospital (40.5%), 179 Hasanuddin University Hospital (37.8%), and 103 Haji Hospital (21.7%). The characteristics of the respondents can be seen in table 1. Most of respondents are women with 369 people (77.8%), with educational background are professions 192 people (40.5%), 228 people (48.1%) are the Buginese, 269 respondents (56.8%) worked 40 hours or more a week, 286 people (60.3 %) are permanent workers.

Table 1. Characteristics of Respondents

Respondent Characteristic		N	%
Age	18-25	12	2.5
	26-34	314	66.2
	35-50	134	28.3
	> 50	14	3.0
Gender	Female	369	77.8
	Male	105	22.2
Length of working	<1 year	0	0
	1-3 years	233	49.2
	> 3 year	241	50.8
Education	SMA / equivalent	2	0.4
	D3 / equivalent	120	25.3
	S1	116	24.5
	Profession	192	40.5
	S2	27	5.7
	SP1	11	2.3
	SP2	3	0.6
Duration of Work	<20 hours / week	48	10.1
	20-39 hours / week	157	33.1
	40 hours / week	269	56.8
Ethnicity	Bugis	238	48.1
	Makassar	137	28.9
	Mandar	8	1.7
	Toraja	55	11.6
	Java	13	2.7
	Others	33	7.0

Source: Primary Data, 2020

Table 2. Job Satisfaction Categories Based on Job Characteristics Variables, Work Environment, Awards, and Relationships with Management

Job Satisfaction Variable	Not satisfied		Less satisfied		Satisfied		Very satisfied	
	N	%	N	%	N	%	n	%
Job Characteristics	0	0	9	1.9	442	93.2	23	4.9
Work environment	1	2	7	1.5	285	60.1	191	38.2
Appreciation	7	1.5	127	26.8	286	60.3	54	11.4
Relations with Management	1	2	15	3.2	196	41.4	262	55.2

Source: Primary Data, 2020

Based on Job Satisfaction Variables, 93.2% (442) of respondents were satisfied with the variable job characteristics. For the work environment variable 285

with a percentage of 60.1% were satisfied. From all of job satisfaction variables, 26.8% (127) of respondents stated that they were not satisfied with the reward variable.

Table 3. Categories of Patient Safety Culture by Hospital

Hospital	Reactive		Bureaucratic		Proactive		Generative		Total	
	N	%	N	%	N	%	N	%	N	%
Awal Bros Hospital	0	0	0	0	13	6.8	179	93.2	192	100
Unhas Hospital	0	0	3	1.7	35	19.6	141	78.8	179	100
Haji Hospital	1	1.0	4	3.9	27	26.2	71	68.9	103	100
Total	1	2	7	1.5	75	15.8	391	82.5	474	100

Source: Primary Data, 2020

In table 3, it is explained that of the 474 respondents, 82,5% of respondents answered the patient safety culture level is at the generative level and only one respondent (2%) answered at the reactive level. Based on the hospital, Awal Bros Hospital had the most respondents with a generative level, with 179 respondents (93.2%). Likewise, in the Hasanuddin University Hospital and Haji Regional Hospital, the most respondents had a generative level, with 179 respondents (93.2%) at the Hasanuddin University

Hospital and 71 respondents (68.9%) at the Hajj General Hospital.

Multivariate analysis was carried out for variables that had an effect on work safety culture. Multiple linear regression test aims to find the most dominant variable influencing the work safety culture. The coefficient of determination measures how far the model's ability to explain variations in the dependent variable. The following is a table of the coefficient of determination produced in the study:

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.349	0.122	0.114	10.27861

Based on table 4, it can be seen that the magnitude of R² is 0.122, this means that 12.2% of the variation in work safety culture can be explained by the variation of the four

independent variables while the rest (100% - 12.2% = 87.8%) is explained by other causes outside the model.

Table 5. Simultaneous Significance Test Results (Test Statistic F)

Model	Sum of Squares	df	Mean Square	F	P value
Regression	6861,072	4	1715,268	16,235	0.000
Residual	49549,774	469	105,650		
Total	56410,846	473			

Table 5 shows the results of the F test to find out whether all the independent variables included in the model have a joint influence on the dependent variable. Based on the ANOVA test or the F statistical test, the calculated F value is 16,235 with a probability level of 0.000. The probability

is smaller than 0.05, so the regression model can be used to predict work safety culture, or it can be said that the independent variables together have a significant effect on work safety culture.

Table 6. Result of Significance Test of Partial Effect

Model	Unstandardized Coefficients		Standardized Coefficients	t	P value
	B	Std. Error	Beta		
(Constant)	65,030	6,918		9,400	0.000
Job Characteristics	0.076	0.190	0.018	0.401	0.689
appreciation	0.121	0.090	0.072	1,343	0.180
Work environment	0.313	0.125	0.147	2,501	0.013
Relations with Management	0.431	0.140	0.181	3,078	0.002

Table 6, it can be seen that the most influential independent or independent variable is the relationship with management variable with a coefficient value of 0.431, which means that if the relationship variable with management increases by one point, the work safety

culture variable will increase by 0.431 points. While the variable with the lowest influence is the job characteristics variable with a coefficient value of 0.076, which means that if the job characteristics variable increases by one

point, the work safety culture variable will increase by 0.076 points.

DISCUSSION

The results of the study found that most of the 93.2% (442) respondents were satisfied with the job characteristics. Job characteristics are the nature of the task which includes responsibilities, types of tasks, and the level of satisfaction obtained from the work itself. Hackman & Oldham (1976) stated that diverse jobs and more challenges can improve employee skills and work attitudes. This means that there is a relationship between job characteristics and performance (Hackman & Oldham, 1976).

The results of this study are in line with Plaza's (2017) study showing that employee satisfaction has a significant correlation with patient safety culture. Research by Ooshaksaraie *et al.*, (2016) states that an increase in job satisfaction results in an increase in patient safety culture. In addition, there is a significant direct relationship between nurse job satisfaction and patient safety culture with a correlation coefficient of 0.643 at a significance level of 0.01 (Ooshaksaraie *et al.*, 2016).

According to Siagian (2008: 295) in Panwala *et al.*, 2017, employee job satisfaction is a person's perspective, both positive and negative about his job. Because it is not simple, there are many factors that need to be considered in analyzing one's job satisfaction. For example, the nature of work has a certain effect on job satisfaction. Various studies have proven that if someone has the autonomy to act at work, there are variations, making an important contribution to organizational success and employees get feedback about the results of the work they do, then they will feel satisfied.

Hayashi (2020) said that improving patient safety culture is done by managing the work environment of health workers. Hours of work, number of night shifts, and number of days off can affect patient safety culture differently for doctors and nurses. Research by Tengilimoglu *et al.*, (2016) has found a significant relationship between safety culture, safety performance and job satisfaction and more than that, job satisfaction is a partial intermediary in the relationship between safety culture and safety performance. The results of these studies reveal that safety culture together with job satisfaction can lead to 44% change in safety performance. Research by Maleki *et al.*, (2018) shows that job satisfaction has a positive effect on patient safety culture. The results of research (Jiang *et al.*, 2019) in China revealed that staff rated job satisfaction as the highest among the six research variables on patient safety culture research. Employee satisfaction contributes greatly to the work environment, the more people who are satisfied at work, the more they take a more positive attitude towards themselves and other colleagues. There is a relationship between job satisfaction and improved performance and quality of patient safety, and consequently supports the application of a patient safety culture (Matiello *et al.*, 2016).

Based on regression modeling, it is found that the relationship with management is the most influential variable after being controlled by job characteristics, rewards, and the work environment affecting patient safety culture with a coefficient value of 0.431 meaning that every one-point increase in relationship with management, the patient safety culture variable will increase by 0.431 points. In research (Boamah *et al.*, 2018) job satisfaction is associated with a low number of adverse

events. The ability of managers to communicate with employees and value their opinions is considered very important to staff (Platis *et al.*, 2015). Managers who have a transformational leadership strategy are useful in creating workplace conditions that can improve better patient safety outcomes (Boamah *et al.*, 2018)

According to Ardern & Jane (2012), 3 main factors influence patient safety culture, namely; 1) Attitudes and behavior (senior management, middle management, supervisors, employees, safety and health representatives and commitment of committee members), 2) environment; (type of organization, finance, type of work performed, job design, speed of work, available training, lines of communication, 3) system; (the process of reporting events / incidents that threaten patient safety, the audit process, the investigation process, communication and feedback systems). Based on this, to create a patient safety culture, all levels, from leadership commitment to employees, must be addressed. This study has shown that the relationship with management is the variable that most influences patient safety culture.

For effective safety management, leadership plays a critical role at every level of management, from team leaders to middle managers (e.g., clinical unit heads) at the tactical level to top-level managers (e.g. senior managers of health care organizations / Chief Executive Officers) at strategic levels. . Research studies have shown that certain leadership styles are associated with better safety behavior by workers and more favorable organizational safety performance such as decreased accident rates and increased safety compliance (World Health Organization, 2009). Human factors refer to environmental, organizational and occupational factors, and human and individual characteristics that influence workplace behavior in ways that affect health and safety (World Health Organization, 2009)

Katz-Navon *et al.*, (2005) found that when safety was a high managerial priority, hospital units experienced fewer errors. A UK study revealed that staff perceptions of senior managers' leadership effectiveness were associated with lower rates of patient complaints and better clinical governance ratings (Shipton *et al.*, 2008). Senior managers need to demonstrate their commitment to safety in a visible way, for example by visiting wards, clinics, laboratories, etc. (Shipton *et al.*, 2008).

Research in China also found that commitment to safety management was significantly related to patient safety culture (Feng *et al.*, 2011). Nurses recognize that to build a positive patient safety culture, managers themselves must first demonstrate a real commitment to patient safety in order to change employee attitudes and behavior (Feng *et al.*, 2011) Hospital management support for patient safety related to reporting of events related to drugs, BHP / equipment and collaboration with doctors. With good reporting, there will be fewer incidents. Thus, managers must encourage staff awareness and compliance in incident reporting because it can help develop a strong patient safety culture (Alquwez *et al.*, 2018). Many studies have shown that management plays an important role in creating a culture of patient safety. Improving patient safety culture at management level can help effectively avoid system errors (Park & Kim, 2018).

CONCLUSION

The results of the regression analysis showed that the job satisfaction variable explained 12.2% of the variance in patient safety culture. The results showed that job satisfaction ($p = 0.000 < 0.05$) statistically significant effect

