THE EFFECT OF ORGANIZATIONAL FACTORS ON PATIENT SECURITY INCIDENT REPORTING THROUGH INDIVIDUAL FACTORS

JAM
16, 3
Received, August 2017
Revised, December 2018
June 2018
August 2018
Accepted, August 2018

Anna Rahmawati
Master of Hospital Management Faculty of Medicine Universitas Brawijaya
Achmad Rudijanto
Asti Melani Astari
Nursing Science Faculty of Medicine Universitas Brawijaya

Abstract: This study was conducted to determine the influence of organizational factor, individual factor towards safety patient incident reports, and the influence of organizational factor toward PSI reports through individual factors. This study method was a quantitative cross-sectional. The population is nurses. The sample is determined by purposive sampling, with its quantity is determined based on Slovin formula. The data was analyzed by Partial Least Square (PLS) using SMART PLS program. The result shows that organizational factor has a positive effect toward individual factor, individual factor have a positive effect towards PSI reports, organizational factors have a positive effect towards PSI report, and organizational factors have a positive effect towards PSI report through individual factor. The organizational factor is the most dominant. Manajemen can improve the policies related to the organizational factors by not excluding individual factors.

Keyword: organizational factor, individual factor, incident report

Journal of Applied Management (JAM)
Volume 16 Number 3, September 2018
Indexed in Google Scholar

Correspondention Author: Anna Rahmawati, Master of Hospital Management Faculty of Medicine Universitas Brawijaya
DOI: http://dx.doi.org/10.21776/ub.jam.2018.016.03.11

Hospital patient safety is a system that makes patient care safer at the hospital (Depkes RI, 2006). The patient's safety system prevents injury caused by errors due to an action or not taking action that should be taken (Depkes RI, 2006). One aspect of patient safety culture is reporting incidents of patient safety (NPSA, 2004). Incidents of patient safety reports are accurate data for evaluation and improvement of service systems oriented to patient safety (Bowie, 2010).

The incident report of data on patient safety recorded in the Indonesian Hospital Patient Safety Committee consists of 14.41% of undesired events and 18.53% of near-injury incidents obtained during January - April 2011 (Kemenkes, 2011). Unwanted events in New Zealand were reported to be around 12.9% of admissions (Davis, et al., 2001). According to WHO in 2004 data on incidents of international patient safety ranged from 3.2% -16.6% of admissions (Depkes RI, 2006).

Hospital X in Kediri Regency is a type C hospital located in Pare District, Kediri Regency. Services at Hospital X in Kediri Regency include outpatient care, 160 bed of hospitalization, ED, physiotherapy, hemodialysis, ESWL, radiology, laboratory, anatomical pathology, etc. Hospital X in Kediri Regency's vision is to become a community-chosen hospital that prioritizes improving quality and

patient safety. Hospital X in Kediri Regency has been accredited plenary on August 2, 2016. Data reporting of incidents of patient safety at Hospital X in Kediri Regency in 2014 were 11 reports, in 2015 there were seven reports, and in 2016 there were 186 reports (1.12% of admissions), the most reporting was done by nurses namely 74%. Although the 2016 incidents of patient safety data increased by more than 200% compared to the previous year, this number is still below the data of incidents of international patient safety, namely 3.2% -16.6% of admissions. As a comparison, the number of reports in the seven months before accreditation (January 2016 to July 2016) with seven months after accreditation (August 2016 to February 2017) is 119 and 74 reporting. There was a 37% decrease in the reporting of incidents of patient safety after accreditation compared to reporting incidents of patient safety before accreditation.

Hospital X in Kediri Regency has carried out activities that support reporting of incidents of patient safety in 2016, including providing regular training, the Patient Safety Team secretariat makes proactive efforts to obtain reporting, providing rewards for units that are actively providing reporting. The results of the interview with the Patient Safety Team chairman and secretary mentioned that reporting incidents of patient safety is often done after management knows the incident or the incident has a serious impact. This causes the purpose of reporting incidents of patient safety as learning material and evaluation of services that prioritize quality and patient safety are not fully achieved.

Efforts to achieve good reporting of incidents of patient safety must be carried out. One of them is by knowing the factors that influence Incident reports of patient safety. Nurses as the largest profession in the hospital play an important role in identifying a report of patient safety. Factors that influence incidents of patient safety reports consist of organizational factors, individual factors, and slices of individual and organizational factors (Uribe and Sharon, 2002).

Inhibiting factors for reporting incidents of patient safety include organizational factors, individual factors and the identity report system of patient safety. In this study, the individual factors that influence a clinician to conduct incident reporting are the perception of the effectiveness of the identity report of patient safety, fear, subjective norms, and role identity. Organizational factors include psychological security, management support, participant report feedback from patient safety, clarity of procedures for identifying reports of patient safety, and trust in the reporting system of incidents of patient safety (Yvone Pfeiffer, et al., 2013). This study aims to determine the effect of organizational factors on individual factors, the influence of organizational factors on the identity report of patient safety, the influence of individual factors on the identity report of patient safety, and the influence of organizational factors on reporting incidents of patient safety through individual factors and the factors that most influence the Incident report of patient safety.

METHOD

This research is a quantitative research using cross-sectional approach. The population is nurses in the inpatient room, ED, ICU, operating room, polyclinic, and hemodialysis. The calculation of the sample size uses the Slovin formula and the number of samples is 105 people. The sample size was determined proportionally according to the number of nurses in each unit at Hospital X in Kediri Regency. The inclusion criteria in this study were nurses with a minimum education of D3 Nursing and had received quality training and patient safety certificates. Exclusion criteria are nurses who serve as division heads, subdivision heads and secretaries of Patient Safety.

This study uses primary data collected by the research instrument questionnaire. The variables measured include organizational factors, individual factors and the identification report of patient safety. The data measurement scale uses a Likert scale with four alternative answers. In the organizational factor questionnaire and individual factors, positive statements have the following scores: strongly agree score 4, agree score 3, and disagree score 2 and strongly disagree score 1. For negative statements apply the opposite. The reporting questionnaire uses a Likert scale with a score of 1-4, in the form of a

single question with a choice of answers: a) Never reporting a score of 1, b) 1-2 reporting score 2, c) 3-4 reporting score 3, d) 5 reporting score 4. This research instrument has previously been tested for its validity and reliability. Analysis of data from this study using Partial Least Square (PLS).

RESULTS

Characteristics of Respondents

The research results obtained data on the characteristics of respondents as listed in table 1.

Tabel 1 Karakteristik Responden

No	Characteristics			Frequency	Percentage
1	Gender	a.	Man	32	30.5%
		b.	Woman	73	69.5%
2	Age	a.	21-30 years	57	54.3%
		b.	31-40 years	44	41.9%
		c.	41-50 years	3	2.9%
		d.	> 50 years	1	1%
3	Years of service	a.	<1 year	19	18.1%
		b.	1-10 years	71	67.6%
		c.	11-20 years	13	12.4%
		d.	> 20 years	2	1.9%
4	Position	a.	Executing Nurse	80	76.2%
		b.	Head guard	25	23.8%
5	Employment status	a.	Permanent employee	71	67.6%
		b.	PKWT	34	32.4%
6	Education	a.	Nursing D3	61	58.1%
		b.	S1 nursing	44	41.9%

Source: Data processed, 2017

Data on the characteristics of respondents shows that the sex of the most female respondents is 73 people (69.5%). The highest age of respondents aged 21-30 years is 57 people (54.3%). This shows that the most Hospital X in Kediri Regency nurses at a young age. The most respondent working period is 1-10 years (67.6%). This shows that most nurses have a long period of work that is expected to have sufficient knowledge and work experience. The majority of respondents who participated in this study were nursing nurses (76.2%). While respondents who are guard heads have a percentage of 23.8%.

DATA ANALYSIS RESULTS

The following is the path diagram used for data analysis in this study (Figure 1).

Evaluation of Measurement Model (Outer Model)

This research model consists of 3 constructs, namely organizational factors, individual factors and identifying reports of patient safety. Testing the construct validity and reliability found that overall each indicator is declared valid and reliable in measuring the latent variables. The contribution of measuring indicators of organizational factor variables can be seen in table 2.

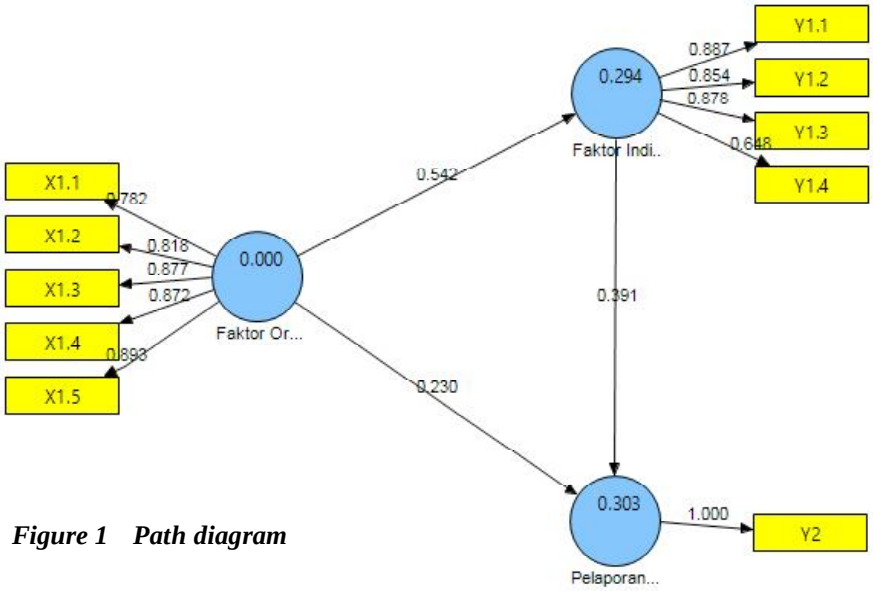

Figure 1 Path diagram

Table 2 Measuring Indicators Variable Organizational Factors

Variable	Indicator	Loading Factor
Organizational Factors	psychological security (X1.1)	0.782
	management support (X1.2)	0.818
	clarity of procedure for reporting incidents of patient safety (X1.3)	0.877
	feedback on reporting incidents of patient safety (X1.4)	0.872
	trust in the identity report system of patient safety (X1.5)	0.893

Source: Data processed, 2017

The measurement model of organizational factor variables informs that the indicator of confidence in the reporting system of incidents of patient safety (X1.5) has the highest loading value of 0.893. This means that the indicator of trust in the system of reporting incidents of patient safety (X1.5) is the most dominant indicator in measuring organizational factor variables. The contribution of measuring indicators of individual factor variables can be seen in table 3 below.

Table 3 Measuring Indicators Variable for Individual Factors

Variable	Indicator	Loading Factor
Individual Factors	Fear (Y1.1)	0.887
	Perception The effectiveness of reporting incidents of patient safety (Y1.2)	0.854
	Subjective Norms (Y1.3)	0.878
	Role Identity (Y1.4)	0.648

Source: Data processed, 2017

The measurement model of individual factor variables informs that the indicator of the perception of the effectiveness of reporting incidents of patient safety (Y1.1) has the highest loading value of 0.887. This means that the indicator of the perception of the effectiveness of reporting incidents of patient safety (Y1.1) is the most dominant indicator in measuring individual factor variables. The contribution of measuring indicators to the variable reporting of incidents of patient safety can be seen in table 4 below.

Table 4 Measuring Indicators Variable Identity report of patient safety

Variable	Indicator	Loading factor
The incident report of patient safety	The frequency of reporting incidents of patient safety (Y2.1)	1.000

Source: Data processed, 2017

The value of frequency loading indicator reporting for the incident of patient safety (Y2.1) is 1,000. This means that the contribution of frequency indicators reporting incidents of patient safety (Y2.1) in measuring the variable reporting of incidents of patient safety is 100.0%.

Structural Model Evaluation (Inner Model)

The goodness of fit model is used to determine the ability of endogenous variables to explain the diversity of exogenous variables, or in other words to determine the magnitude of the contribution of exogenous variables to endogenous variables. The goodness of fit Model in PLS analysis is done using Q-Square predictive relevance (Q2).

Tabel 5 The goodness of Fit Model

Variable	R^2
Individual factors	0.294
The incident report of patient safety	0.303
$Q^2 = 1 - (1 - R_1^2) (1 - R_2^2)$è	
$Q^2 = 1 - (1 - 0.294) (1 - 0.303) = 0.507$	

Source: Data processed, 2017

R-square of individual factor variables is 0.294 or 29.4%. This shows that the contribution of individual factor variables to organizational factor variables is 29.4%, while the remaining 70.6% is the contribution of other variables not addressed in this study. R-square reporting variable incidents of patient safety are 0.303 or 30.3%. This shows that the contribution of organizational factors and individual factors to the reporting variable of incidents of patient safety is 30.3%, while the remaining 69.7% is the contribution of other variables not addressed in this study. Q-Square predictive relevance (Q2) is 0.507 or 50.7%. This can indicate that the contribution of organizational factors, individual factors to the reporting variable of incidents of patient safety as a whole is 50.7%, while the remaining 49.3% is the contribution of other variables not addressed in this study.

Testing the Direct Effect Hypothesis

Hypothesis testing is used to test whether there is an influence of exogenous variables directly on endogenous variables. The test criteria state that if the T-statistics value $\geq$ T-table (1.96) then there is a significant effect of exogenous variables on endogenous variables.

From table 6 it can be seen that there is an influence of organizational factors on individual factors, individual factors on the release of incidents of patient safety and organizational factors on the identity report of patient safety.

Table 6 Testing the Direct Effect Hypothesis

Exogenous	Endogenous	Original Sample (O)	Standard Error (STERR)	T Statistics (|O/STERR|)
Organizational Factors	Individual Factors	0.542	0.079	6.892
Organizational Factors	The incident report of patient safety	0.23	0.103	2.242
Individual Factors	The incident report of patient safety	0.391	0.115	3.404

Source: Data processed, 2017

Indirect Effect Hypothesis Testing

The indirect effect hypothesis testing is conducted with the aim to examine whether there is an indirect influence of exogenous variables on endogenous variables through mediating variables. The testing criteria state that if the path coefficients are positive and T-statistics $\geq$ T-table (1.96) there is a positive and significant influence.

From table 7 it can be concluded that organizational factors have a positive and significant effect on reporting incidents of patient safety through individual factors.

Table 7 Indirect Effect Hypothesis Testing

Exogenous	Mediation	Endogenous	Indirect	SE	T Statistics
Organizational Factors	Individual Factors	The incident report of patient safety	0.212	0.069	3.052

Source: Data processed, 2017

The most dominant factor influences the Incident report of patient safety

The most dominant factor can be seen in the total value of the biggest effect.

The results of the analysis informing exogenous variables that have the greatest total effect on reporting incidents of patient safety are organizational factors with a total effect of 0.441. Thus organizational factors have the most dominant influence on the identity report of patient safety.

DISCUSSION

The results showed that organizational factors had a positive and significant effect on the identity report of patient safety. This shows that the better organizational factors tend to be able to increase the identification report of patient safety. The results of this study are in accordance with the results of the study Heru Iskandar (2014), which states that organizational factors (perception of knowledge,

Table 8 Effect of Exogenous Variables Directly or Indirectly on Endogenous Variables through Mediation Variables

Exogenous	Mediation	Endogenous	Direct	Indirect	Total
Organizational Factors		Individual Factors	0.542*		0.542
Organizational Factors	Individual Factors	The incident report of patient safety	0.230*	0.212*	0.441
Individual Factors		The incident report of patient safety	0.391*		0.391

Source: Data processed, 2017
Description: * (Significant)

the culture of patient safety, response to reporting) partially have a significant effect on the intention to report. This is also consistent with research Evans, et al. (2006), which states that the reporting barrier one of them is feedback from the management that is not strong. The study by Chiang and Ginette (2006), state that is the administrator's response to incidents of patient safety that do not match the severity of errors. Research Hwang, et al. (2012), that is feedback and late problem-solving.

The overall indicators of the variables of organizational factors (psychological security, management support, clarity of the procedure for identifying reports of patient safety, feedback on the identity of the report of patient safety, trust in the identity report system of patient safety) contributed to the identification of the report of patient safety. An indicator of trust in reporting incidents of patient safety is the most dominant indicator in measuring organizational factor variables. This is different from the results of the study Yvone Pfeiffer, et al. (2013), which states that in organizational factors, management's support is the most dominant. Research result Hsuan Lee (2015), also mentions psychological security, influencing the desire of nurses to implement incident reporting of patient safety.

Trust in the reporting system of incidents of patient safety is defined as staff confidence that the analysis procedure for reporting incidents of patient safety is carried out by competent and confidential people. (Yvone Pfeiffer, et al., 2013). The assessment of this indicator includes the Patient Safety Team response to the severity of errors and the belief that the reports provided will remain anonymous. This is in accordance with the characteristics of reporting incidents of good patient safety, namely: 1) not punish; 2) confidential; 3) independent; 4) analyzed by experts; 5) on time; 6) system oriented; 7) responsive (The Health Foundation, 2013). According to the researchers, this shows that nurses who provide reporting incidents of patient safety do not want their names to be known that the employee has committed the incident. A response from PATIENT SAFETY according to the severity of the error and the impact it has caused. As far as is known by researchers that the Patient Safety Team at Hospital X in Kediri Regency has to collect Incident reports of patient safety, conduct investigations and report to management. Management in charge of providing feedback to employees. The feedback can be in the form of re-socialization, training, and individual or group guidance. This individual guidance makes employees ultimately do not believe that reporting will remain anonymous.

Hospital leaders who are strongly committed to patient safety programs are expected to encourage all hospital staff to play an active role in incident reporting of patient safety. Management must improve communication with its employees about the importance of reporting incidents of patient safety as learning so that incidents do not happen again. Staff who are members of the Patient Safety Team must also improve their competence in preparing investigations, grading, and RCA so that reports submitted to management are appropriate and consistent.

The results showed that individual factors had a positive and significant effect on the identity report of patient safety. This shows that the better individual factors tend to be able to increase the identity report of patient safety. All indicators of individual factor variables (fear, the perception of the effectiveness of the identity report of patient safety, subjective and role identity norms) contributed to the identification of reports of patient safety. The fear indicator (Y1.1) is the most dominant indicator in measuring individual factor variables. This is consistent with the results of the study by Chiang and Ginette (2006), which states that the main reporting barrier is fear. The fear assessed in this study includes fear of being labeled incompetent due to reporting, fear of being perceived as lacking quality, fear of being considered incompetent by co-workers, fear of being reprimanded or punished if incident reporting of patient safety.

Some previous studies concluded that fear of the consequences of reporting is a major barrier to the successful reporting system of incidents of patient safety (Uribe and Sharon, 2002, Koohestani, 2009, and Ginsburg, 2008). Hospital management must be able to show concrete steps that can be felt directly by all staff that reporting incidents of

patient safety will not cause negative consequences. This is consistent with the culture of reporting incidents of patient safety, namely the no blame culture.

Organizational factors have a positive and significant effect on individual factors. This shows that the better organizational factors tend to be able to strengthen individual factors. Group membership can change individual behavior. The influence of the organization will make individuals do things that are not done if they are alone. The influence of organizations on individuals depends largely on the norms of norms that exist in the group (M, 1990). This is also consistent with the theory which states that the right combination of financial and non-financial service benefits will spur organizational performance through individual performance (Wahjono, 2010). According to the researcher, management must further increase the reward, in this case, related to individual variables are non-financial rewards. Sincere praise, more intense communication, more attention, and education. This non-financial reward is expected to increase trust in management and reduce fear.

Organizational factors have a positive and significant effect on reporting incidents of patient safety through individual factors. Individual factors play an important role in identifying a report of patient safety. This is due to the individual factors influencing both directly and as an intermediate variable to the identity report of patient safety. The dominance of negative individual factors (high fear, the perception that reporting incidents of patient safety are not important, feeling not having a hospital) has an impact on the failure of the identity report of patient safety. On the other hand, reporting incidents of patient safety work well if positive individual factors are more dominant than the other factors. The results showed that the factors that have the most dominant influence on reporting incidents of patient safety were organizational factors. The stronger the organization, the stronger it affects individuals in incident reporting of patient safety.

RESEARCH IMPLICATIONS

The results of this study are expected to provide information to the Hospital X in Kediri Regency management to improve policies related to organizational factors by not ruling out individual factors in the identification report of patient safety. Organizational factors have the strongest influence on identifying reports of patient safety. The results of this study stated that trust in the reporting system of incidents of patient safety contributed the most to organizational factors. Training for members of the Patient Safety Team must be done periodically. Management is expected to improve the Patient Safety Team's competence in preparing investigations, grading, and RCA so that reports submitted to management are appropriate and consistent. The high competency of the Patient Safety Team will increase the nurses' trust in the identity report system of patient safety. More expected patient safety culture is anonymous and no blaming reporting, this is consistent with the research of Kim, et al. (2010) and Uribe and Sharon (2002). In individual factors, it is found that fear contributes the most. The dominance of negative individual factors (for example: fear) will have an impact on the implementation of the incident report of patient safety. The individual approach is done by reducing the way or behavior that is less appropriate such as embarrassing, blaming, giving a penalty such as making a mistake three times will be issued.

RESEARCH LIMITATIONS

Research is limited to variables of organizational factors and individual factors. This research only measures first order only, does not measure the second order. The questionnaire used in this study is a closed questionnaire that causes respondents to the only answer according to the questions/statements listed in the questionnaire. Researchers hope that there will be those who continue their research with other research methods such as qualitative methods to explore the factors that underlie nurses in conducting identification reports of patient safety.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study concludes that organizational factors influence individual factors, individual factors influence the incidence of patient safety, organizational factors influence the report of patient safety, and organizational factors influence the reporting of incidents of patient safety through individual factors. The most dominant factor for reporting incidents of patient safety is organizational factors.

Recommendation

Researchers hope further research can analyze the second order so that each item is analyzed. Researchers also hope that further research can use other methods, such as qualitative methods so that it can further explore the factors that influence the identity report of patient safety.

REFERENCES

Bowie P. 2010. *Leadership and Implementing a Safety Culture*, Practice Nurse, vol. 10, pp. 32-35.

Chiang., H. and Ginette A. Pepper. 2006. *Barriers to reporting of Medications Administration Errors in Taiwan.* Journal of nursing scholarship. vol. 38, no. 4, pp. 392-399.

Davis P., Lay-Yee R., Briant R., Schug S., Scott A., Johnson S. and Bingley W. 2001. *Adverse event in New Zealand public hospitals: principal findings from a national survey.* New Zealand: The Ministry of Health New Zealand Wellington.

Departemen Kesehatan Republik Indonesia. 2006. *Panduan Nasional Keselamatan Pasien Rumah Sakit*. Jakarta.

Komite Keselamatan Pasien Rumah Sakit. 2011. *Pedoman Pencatatan dan Pelaporan Insiden Keselamatan Pasien*. Jakarta.

Komite Keselamatan Pasien Rumah Sakit. 2008. *Pedoman Pelaporan Insiden Keselamatan Pasien. Edisi 2*. Jakarta.

Siegel M. 1992. *Issues, Theory, and Research in Industrial/Organizational Psychology, Editor by Louise Kelley. 1st Edition.* Nort Holland.

National Patient Safety Agency. 2004. *Seven Step to Patient Safety: The Full Reference Guide*. London.

Uribe, C and Sharon, B. S. 2002. *Perceived Barriers to Medical Error Reporting: an Exploratory Investigation.* Journal of Healthcare I Management, vol. 47, no. 4, pp. 63-84.

Wahjono S. I. 2010. *Perilaku organisasi*. Jakarta: Graha Ilmu.

Yvone Pfeiffer., M. B., Theo Wehner, and Tanja Manser. 2013. *Motivational antecedents of incident reporting: evidence from a survey of nurses and physicians. Swiss Medical Weekly.* The European Journal of Medical Science. vol. 10, p. 143.

The Health Foundation. 2013. *10 Facts on Patient Safety*. World Health Organization (WHO)