Science, Engineering and Social Science Series
ISSN/e-ISSN: 2541 – 0369/2613 – 988X
Vol. 4, No. 6, 2020, Printed in the Indonesia

The Differences in Patient Safety Culture (Before and After Training) over Patient Safety on Pharmacy and Radiological Installations at Type B Hospital, Jakarta

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Based on 20% incidents are associated with pharmaceutical and radiological installations. A quasi experiment design with pre-test and post-test without control was employed. There were 43 health personals was involved in this study: 33 from pharmaceutical and 10 from radiology installations without randomization. This study aimed to evaluate the effectiveness of training on patients' safety culture among pharmaceutical and radiology personal's installations at a type B hospital in Jakarta. The Hospital Survey of Patient Safety Culture (HSOPSC) developed by Agency for Health Care Research and Quality (AHRQ) questionnaire was applied in the data collection. To evaluate the impact of training, Wilcoxon Sign Rank test was employed. The data analysis technique used was the Wilcoxon Signed Rank Test, to assess the differences between the variables tested. The training was significantly improving the patient's safety culture among those two installations' personals ($p < 0,05$). There was an increase in 8 dimensions of patient safety culture.

Keywords: Training on Patient Safety, Patient Safety Culture

1. INTRODUCTION

Healthcare can be said to be a quality when focused on patient safety. Hospitals with a variety of components that exist in indirectly create conditions that are at high risk to the safety of patients. Therefore, necessary knowledge about the occurrence of errors or near missed that has occurred or which may occur as a media learning so that the incident is not repeated that will certainly decrease morbidity and mortality so that patient safety can be achieved and quality health services can be created [1]. Incident reporting is one way that can be used to identify risks. A good reporting system will invite everyone in the organization to care for the danger or potential harm that can happen to the patient. According to the IOM report (Medicine, 2000): "To Err is Human", Building a Safer Health System. Washington, D.C: National Academy Press, 2000, Health services in the United States is not safe where there are errors caused by human factors in the health care system that there is a case of the patient's death due to unexpected events of 44,000 – 98,000 per year with an estimated cost of about $17-$50 billion per - year or 268 cases per day of death from hospital services on unexpected events, higher than KLL cases (43,458), Cancer (42,297) and AIDS (16,516). In Indonesia, the reporting rate of patient safety incidents especially the unexpected occurrence is still very little. Here, In Indonesia there are 7 root problems underlying cause of low reporting of patient safety incidents namely fear of blame, lack of management commitments, absence of reward when reported, do not know which and what is reported, socialization of the incidence of patient safety less maximal, have not participated in training and the lack of active socialization of the Hospital Patient Safety Commission. In every organization there is a culture that affects the attitudes and behaviors of individuals therein. The competency and cultural values of the staff and leadership are key determinants to the effectiveness and success of the Organization and will affect the loyalty of larger employees and better organizational performance [2, 3]. Patient safety culture is a constant awareness and active potential by an organization's staff in recognizing something that seems to be wrong. Staff and organizations that are able to acknowledge mistakes, learn

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from mistakes and want to take action to make improvements are said to have implemented the culture of safety [4]. The safety culture of patients is defined as an integrated pattern of individual and organizational behaviors based on beliefs and shared values that continually strive to minimize actions that may harm patients who may arise from the treatment process [5]. In one type B RS in Jakarta, based on data from the patient's safety and Quality Improvement Committee during the year 2018 of January S/d December, the reported patient safety incident is as much as 134 reports and 102 cases are case-unforeseen and a total of 20% is associated with pharmaceutical and radiological installations. The incoming Data can be said to be not comparable to the fact of the field. Because the fact is still quite often the incidence of safety of patients who occur in the field but not reported. This can be due to the ignorance of employees in the field that it is an incident that needs to be reported, a sense of unpalatable to report incidents made by friends on the ground and still many field work so as not to make an incident report and also based on fear of sanctions from superiors and management due to negligence in the incident [6]. The study of patient safety cultures based on existing incident reports is the first step to make changes in improving patient safety [7]. A culture assessment is indispensable in the effort to increase patient safety [8]. One of the tools for measuring the implementation of patient safety culture is with The Hospital Survey of Patient Safety Culture (HSOPSC) instrument questionnaire developed by Agency for Health Care Research and Quality (AHRQ). The Hospital Survey of Patient Safety Culture, developed by AHRQ, uses components as an indicator of each dimension of patient safety culture [9]. Indicator of the cultural transparency dimension include open communication, cooperation in the unit, cooperation between units, patient safety perception. The cultural dimension indicators of justice are feedback and communication, employment or staffs, response does not punish.

The Reporting Culture dimension indicator contains components event reporting, and hand over indicators of the Learning culture dimension contain components organizational learning, expectations and action of supervisor/manager in developing patient safety culture management support. Management support is the Institute of Medicine (IOM) defines safety as freedom from accidental injury. Salvation is stated as the first realm of this quality and safety definition is a statement from the patient's perspective [10]. Knowledge is the result of the know, so the individual performs the sensing of a particular object [11]. Training is a systematic process for individuals to acquire and develop the skills and knowledge needed for better performance [12, 13]. The important reason researchers take the unit of pharmaceutical installation and radiology installation is because of the least existing incident reporting, mostly occurring in the pharmaceutical and radiological areas, such as labeling errors and typing of patient names, drug intake errors and so on. Therefore, researchers want to know the difference in patient safety culture before and after training on patient safety in pharmaceutical installation and radiology installation at RS type B in Jakarta [14].

2. METHODOLOGY

In general, this study was conducted to determine the differences in the safety culture of patients before and after training on patient safety in pharmaceutical installations and radiology installation of Sumber Waras Hospital. This study has special purpose, first to analyze the safety culture of the patient in the pharmacy installation hospital Sumber Waras before training on patient safety. Second special purpose analyzes the safety culture of the patient in the pharmaceutical installation of Sumber Waras hospital after training on patient safety. And next special purpose is analyzing the safety culture of the patient in the radiology hospital of Sumber Waras before training on patient safety, and analyzing the safety culture of the patient in the radiological installation of Sumber Waras hospital after training on patient safety.

This research uses a quantitative approach with the type of comparative type hypothesis testing (action Research) pretest-posttest-without-control approach to measure the effect of patient safety training given by the profession as caregivers in the pharmacy unit and radiology unit on patient safety culture in that unit. Training on patient safety will be carried out using the off the job training method in the form of class lectures within 1 day with participants being pharmaceutical installation officers and radiology installation officers at Sumber Waras Hospital. Safety culture as the dependent variable that was observed before and after patient safety training was carried out. Measurements regarding patient safety culture were taken from primary sources, namely the profession as caregivers in pharmaceutical installations and radiology installations indirectly using the HSOPSC questionnaire. The research was conducted in one type B RS in Jakarta with a sample of 43 people consisting of 33 pharmaceutical officers and 10 radiology officers. Time and place of research conducted at Sumber Waras Hospital, Jl. Kyai Tapa No. 1, Grogol - West Jakarta and will be held in January 2020.

3. RESULTS AND DISCUSSION

Based on the results of a survey of safety cultures at pharmaceutical installations, radiology installations and pharmaceutical installations and radiology installations before and after patient safety training, researchers will undertake a hypothesis test with Mann Whitney U Test Whether there is a significant difference in patient safety culture in pharmaceutical installations, radiology installations as well as pharmaceutical installations and radiology installations before and after patient safety training.

A. Pharmaceutical Installation

Based on the overall calculation of positive perception of respondents to patient safety culture in pharmacy installation after the patient safety training is 51.03%. The value was entered into medium category and increased by 1.16% compared to the patient's safety training. Although from hypotheses test, there is no significant difference in the safety culture of patients in pharmacy installation before and after patient safety training (see Table I).

Table I. Results Survey of patient safety culture in pharmacy installation before and after patient safety training

No	Dimensions	Before	Category	After	Category
1	Cooperation in the unit	68,18 %	Medium	66,67 %	Medium
2	Staff expectations on attitudes and actions PT/Managers in encouraging patient safety	58,33 %	Medium	59,85 %	Medium
3	Organizational Learning and ongoing improvement	79,80 %	Good	79,80 %	Good
4	Management support of patient safety	52,53 %	Medium	50,51 %	Medium
5	Overall perception of patient safety	34,09 %	Less	35,61 %	Less
6	Feedback and communication on the incidence of patient safety	66,67 %	Medium	66,67 %	Medium
7	Communication disclosure	54,55 %	Medium	59,60 %	Medium
8	Reported incidence frequency	53,54 %	Medium	57,58 %	Medium
No	**Dimensions**	**Before**	**Category**	**After**	**Category**
9	Cooperation between units	46,97 %	Less	50,76 %	Medium
10	Staffing	29,55 %	Less	29,55 %	Less
11	Handover and transition	31,06 %	Less	32,58 %	Less
12	Non punitive response to errors	23,23 %	Less	23,23 %	Less
	Mean	**49,87 %**	**Less**	**51,03 %**	**Medium**

Based on overall calculation in Table I, the positive perception of respondents to patient safety culture in pharmacy installation after the patient safety training is 51.03%. The value was entered into medium category and increased by 1.16% compared to the patient's safety training. Although from hypotheses test, there is no significant difference in the safety culture of patients in pharmacy installation before and after patient safety training. In the results of data processing based on Wilcoxon Signed Ranks Test at the pharmaceutical installation obtained a decline in the 2 dimensions of safety culture, an increase in 6 dimensions of safety culture and 4 dimensions of culture did not decline or increase after the training of safety cultural safety.

B. Radiology Installation

Furthermore, based on the overall calculation of positive perception of respondents to patient safety culture in radiology installation after the patient safety training is 54.37%. The value was entered into medium category and increased by 2.77% compared to the patient's safety training. Although from hypotheses test, there is no significant difference in the safety culture of patients in radiology installations before and after patient safety training (see Table II).

Table II. Results Survey of patient safety culture in radiology installation before and after patient safety training

No	Dimensions	Before	Category	After	Category
1	Cooperation in the unit	75 %	Good	75 %	Good
2	Staff expectations on attitudes and actions PT/Managers in encouraging patient safety	60 %	Medium	67,5 %	Medium
3	Organizational Learning and ongoing improvement	60 %	Medium	66,67 %	Medium
4	Management support of patient safety	43,44 %	Less	40 %	Less
5	Overall perception of patient safety	57,50 %	Medium	62,5 %	Medium
6	Feedback and communication on the incidence of patient safety	60 %	Medium	63,33 %	Medium
7	Communication disclosure	56,67 %	Medium	56,67 %	Medium
8	Reported incidence frequency	20 %	Less	30 %	Less
9	Cooperation between units	50 %	Medium	50 %	Medium
10	Staffing	47,5 %	Less	47,5 %	Less
11	Handover and transition	42,5 %	Less	50 %	Less
No	**Dimensions**	**Before**	**Category**	**After**	**Category**
12	Non punitive response to errors	46,67 %	Less	43,33 %	Less
	Mean	**51,6 %**	**Medium**	**54,37 %**	**Medium**

In the results of the data processing, in the radiology installation obtained a decline in the 2 dimensions of safety culture, an increase in 6 dimensions of safety culture and 4 dimensions of culture did not decline or increase after the safety of cultural safety training.

C. Pharmaceutical Installation and Radiology installation

Based on the overall calculation of positive perception of respondents to patient safety culture in pharmaceutical installation and radiology installation after the patient safety training is 52.71%. The value was entered into medium category and increased by 1.97% compared to the patient's safety training. From hypotheses, there is a significant difference in the safety culture of patients in

pharmaceutical installation and radiology installations before and after patient safety training (see Table III).

Table III. Results Survey of patient safety culture in pharmaceutical installation and radiology installation before and after patient safety training

No	Dimensions	Before	Category	After	Category
1	Cooperation in the unit	71,59 %	Medium	70,84 %	Medium
2	Staff expectations on attitudes and actions PT/Managers in encouraging patient safety	59,16 %	Medium	63,68 %	Medium
3	Organizational Learning and ongoing improvement	69,9 %	Medium	73,24 %	Medium
4	Management support of patient safety	47,99 %	Less	45,26 %	Less
5	Overall perception of patient safety	45,79 %	Less	49,06 %	Less
6	Feedback and communication on the incidence of patient safety	63,34 %	Medium	65 %	Medium
7	Communication disclosure	55,61 %	Medium	58,14 %	Medium
8	Reported incidence frequency	36,77 %	Less	43,79 %	Less
9	Cooperation between units	48,49 %	Less	50,38 %	Medium
10	Staffing	38,53 %	Less	38,53 %	Less
11	Handover and transition	36,78 %	Less	41,29 %	Less
12	Non punitive response to errors	34,95 %	Less	33,28 %	Less
	Mean	**50,74 %**	**Medium**	**52,71 %**	**Medium**

Table III shows the data processing from pharmaceutical installation and radiology installation obtained a decline in the 3 dimensions of safety culture, an increase in 8 dimensions of safety culture and 1 dimension of culture has not decreased or increased after safety of cultural safety training. In the result of data processing respondent of pharmaceutical installation as much as 33 people with the result of Asymp. Sig 0.685 > 0.05 Hence the overall respondent there is no significant difference after the patient safety training. In the data processing results 12 dimensions of safety culture, in the pharmaceutical installation obtained a decline in the 2 dimensions of safety culture, increase in 6 dimensions of safety culture and 4 dimensions of culture did not decline or increase after the safety of cultural safety training. Statistical hypothesis Conclusion on the results of a Survey of patient safety culture in pharmaceutical installation of statistical test results above where the value of significance/(sig.)/(P)/(Asymp. Sig.) > 0.05, then H02 received and Ha2 rejected, which means there is no difference between the variables tested so that in this study the statistical hypothesis gained was no significant difference to the safety culture of the patient at the pharmaceutical installation before and after patient safety training but there was an increase in the expectations of the staff's dimensions on the supervisor's attitudes and actions/managers in encouraging patient safety, dimensions of overall perception on patient safety, communication disclosure dimension, frequency dimension of incident reported, dimension of cooperation between units and dimension of handover and transition. Here, In the results of data processing respondent's radiology installation as much as 10 people with the result of Asymp.

Sig 1.000 > 0.05 Hence the overall respondent does not have a significant difference after the patient safety training. On the result of 12 data processing of patient safety culture above, in radiology installation obtained a decline in 2 dimensions of safety culture, increase in 6 dimensions of safety culture and 4 dimensions of culture is not decreased or increased after the safety of security culture training. Statistical hypothesis Conclusion on the results of a Survey of patient safety culture in radiology installation of statistical test results above where the value of significance/(sig.)/(P)/(Asymp. Sig.) > 0.05, then H03 received and Ha3 rejected, which means there is no difference between the variables tested so that in this study the statistical hypothesis gained was no significant difference to the safety culture of the patient at the radiology installation before and after patient safety training but an increase in the expectations dimension of staff to the supervisor's attitudes and actions/managers in encouraging patient safety, organizational learning dimension, overall perception dimensions on patient safety, feedback and communication dimensions on patient safety incidents, reported incidence frequency dimensions, and handover dimension and transitions.

D. *Pharmaceutical Installation and Radiology installation*

In the result of data processing respondent of pharmaceutical installation and radiology installation as much as 43 people with the result of Asymp. Sig 0.685 > 0.05 then the overall respondent there is no significant difference after the patient's safety training. In the results of 12 data processing of patient safety culture above, in pharmaceutical installation and radiology installation obtained a decline in 3 dimensions of safety culture, increase in 8 dimensions of safety culture and 1 dimension of culture has not decreased or increased after the safety of security culture training. Statistical hypothesis Conclusion on the results of patient safety culture Survey in Pharmaceutical installation and radiology installation of the statistical test results above where the significance/(sig.)/(P)/(Asymp. Sig.) < 0.05, then H01 rejected and Ha1 received, which means there is a difference between the variables tested so that in this study the statistical hypothesis gained was there is a significant difference in the safety culture of patients at the pharmaceutical installation and radiology installations before and after patient safety training in which there was an increase in the expectations dimension of staff on Supervisor's attitudes and actions in encouraging patient safety, organizational learning dimension and ongoing improvement, overall dimensions of perception on patient safety, feedback and communication dimensions on patient safety incidents, communication disclosure dimensions, reported incidence frequency dimensions, dimension of cooperation between units, and handover and transition dimensions.

4. CONCLUSION

The study of patient Safety on pharmacy and Radiological Installations at Type B Hospital has been successful. Here, there are differences in the safety culture of patients before and after training on patient safety in pharmaceutical installations and radiology installation of RS type B in Jakarta. The safety culture of patients in the pharmaceutical installation of RS type B in Jakarta before training on patient safety of 49.87% in the category of less. The safety culture of patients in the pharmaceutical installation of RS type B in Jakarta after training on the safety of patients 51.03% in medium category. Patient safety Culture in the radiology installation of RS type B in Jakarta before training on patient safety of 51.6% in medium category. Patient safety Culture in the radiology installation of RS type B in Jakarta after training on patient safety of 54.37% in medium category.

Furthermore, Researchers recommend to implementing good human resources management to address new employee's employment and orientation turnover in terms of service and implementation of patient safety culture and together with all staff declaring that we support patient safety and are done in writing with the signing. Then the leader of Sumber Waras Hospital conducted a review related to the regulation of existing patient safety culture if any need to be repaired. After the regulation of the safety culture of the patient has been confirmed, socialization with the aim that the entire staff can work by applying the safety culture of the patient in order to prioritize the safety of patients then conduct periodic monitoring and evaluation of the patient Safety program.

References

[1]. Fleming, M. (**2005**). Patient safety culture measurement and improvement: a "how to" guide. Healthcare Quarterly (Toronto, Ont.). https://doi.org/10.12927/hcq.2005.17656

[2]. Greenberg, J., & Baron, A. R. (**2008**). Behaviour in Organizations Pearson international edition.

[3]. Gunawan, G., Harijanto, H., & Harijanto, T. (**2015**). *Analisis Rendahnya Laporan Insiden Keselamatan Pasien di Rumah Sakit. Jurnal Kedokteran Brawijaya*. https://doi.org/10.21776/ub.jkb.2015.028.02.16

[4]. IOM. (**1999**). Institute of Medicine. To Err Is Human: Building a Safer Health System. In To Err Is Human: Building a Safer Health System. https://doi.org/10.1017/S095026880100509X

[5]. Kohn L, C. J. D. M. (**2000**). To Err is Human: Building a Safer Health Care System. In The Florida nurse.

[6]. Lunenberg, M., & Samaras, A. P. (**2011**). Developing a pedagogy for teaching self-study research: Lessons learned across the Atlantic. Teaching and Teacher Education. https://doi.org/10.1016/j.tate.2011.01.008

[7]. Medicine, I. O. (**2000**). Errors in Health Care: A leading Cause of death and Injury. To Err Is Human: Building a Safer Health System.

[8]. National Patient Safety Agency. (**2004**). Seven steps to patient safety The full reference guide. Npsa. https://doi.org/Date accessed 30/03/14

[9]. NHS Commissioning Board. (**2013**). Commissioning for quality and innovation (CQUIN): 2013/4 guidance. In Nhs.

[10].Notoatmodjo, S. (**2007**). *Promosi Kesehatan & Perilaku. In Jakarta: Rineka Cipta*.

[11].P. Robbins, Stephen (San Diego State University); Judge, T. A. (Univercity of N. D. (**2013**). Organizational Behaviour.

[12].Tingle, J. (**2011**). The WHO patient safety curriculum guide. In British Journal of Nursing. https://doi.org/10.12968/bjon.2011.20.22.1456

[13].Vincent, C. (**2007**). Incident reporting and patient safety. In British Medical Journal. https://doi.org/10.1136/bmj.39071.441609.80

[14].Weaver, S. J., Lubomksi, L. H., Wilson, R. F., Pfoh, E. R., Martinez, K. A., & Dy, S. M. (**2013**). Promoting a Culture of Safety as a Patient Safety Strategy. Annals of Internal Medicine. https://doi.org/10.7326/0003-4819-158-5-201303051-00002

Received: 24 August 2020, Accepted: 25 October 2020