

Patient Safety Culture in Dental Hospital : Communication Openness, Teamwork, and Organizational Learning

Hikmah Fajarosita Az Zahrah¹, Haryadi², A. Haris Budi Widodo^{3*}

¹ Faculty of Economics and Business, Jenderal Soedirman University

² Faculty of Economics and Business, Jenderal Soedirman University

³ Faculty of Economics and Business, Jenderal Soedirman University

Abstract. Patient safety has become a major focus of ethics related to health care in recent years. Culture of patient safety in hospitals is part of organization culture, so that the necessary assessment of organizational culture as a guide in the development of patient safety. All health workers, including professional students who undergo clinical learning in hospitals, need to understand and be able to apply the knowledge and skills in this area of patient safety in order to achieve complete patient service. This study aims to analyze the influence of various factors such as communication openness, teamwork, and organizational learning toward patient safety culture at RSGM Jenderal Soedirman University. The study design is a quantitative research using regression analytic method with cross-sectional approach. Data collection tools in the form of the questionnaire were assessed using a Likert scale of 1-5 is strongly disagree, disagree, neutral, agree, and strongly agree. The study population was clinical dental student in 1st till 4th year who had treated patients under supervision at RSGM Jenderal Soedirman University. The sampling technique using purposive sampling method that is random sampling technique in which researchers determine the sampling by setting specific criteria in accordance with the purpose of research. Respondents in this study amounted to 83 people which is calculated using the Slovin formula. The data validity and reliability tests analyzed using multiple logistic regression to analyze the influence between variables with SPSS software. The results showed that the communication openness, teamwork, and organizational learning has positively significant effects toward patient safety culture. The conclusions of this research is the better communication openness, teamwork, and organizational learning improve patient safety culture.

Keywords: communication, teamwork, organizational learning, patient safety culture.

1. INTRODUCTION

Patient safety has become a major focus of ethics related to health care in the last few years (Mukeham, 2006). Patient safety is an integral part of the system to improve the quality of health care quality and grounding of all components of quality of services, especially hospitals (Barton, 2009; Aspden, et.al; Surimi, 2018). Institute of Medicine (IOM) stated that there should be attention to the quality of the conceptual component, not only as an indicator for the measurement. These components include a safe, effective, patient-centered care, timely, efficient and equitable (Aspden, et.al, 2010). WHO defines patient safety as the prevention of errors and adverse events to patients related to health care (WHO, 2006).

Adverse events (KTD) is an event that results in injury that is not expected in patients because of an action ("commission") or because of inaction ("omission"), not because of "underlying disease" or the condition of the patient. Data on adverse event that about 10% of patients in developing countries have suffered injuries as a result of unsafe medical practices. More broadly, the data says that in developing countries and economies in transition or an estimated 2.5 to 18.4% of patients experienced at least one adverse event (Wilson, et.al, 2012). In Indonesia, the report found a patient safety incident reporting KTD cases (14.41%) and KNC (18.53%) were caused by the process or clinical procedures (9.26%), medications (9.26%), and patients fall (5.15%) (KKP RS, 2011).

* Corresponding author. Tel.: +62281 643744; Fax: +62281 621966.
E-mail address: harisbudiw@gmail.com

IOM has recommended for health care organizations implement a patient safety culture. Patient safety culture is the integration of individual and organizational behavior patterns are based on the beliefs and values to minimize harm to the patient's condition is continuously (WHO, 2009). The emerging culture of individual and group values, attitudes, perceptions, competencies and patterns of behavior (Myung, et.al, 2012). Students of the medical profession and health workers in hospitals need to understand and be able to apply their knowledge and skills in the area of patient safety (Newell, et.al, 2008). Previous studies indicate that there are likely to occur adverse event in dental health-care settings, although morbidity, death and the financial impact is relatively lower than other health services (Woods, et al, 2007). The adverse event can trigger the entry to the hospital, extra-time inpatient in a hospital, medical spending increases, and permanent injury or even death occurs (Bates, et al, 2009; Zeger, et.al, 2009).

The literature on the safety assessment of patients has been very extensive, especially related to public health services (Bates, et al, 2009), the maternity unit and gynecology (Aboumater, et al, 2012), pharmaceuticals (Newell, et al, 2008), and facilities elderly care (Wilson, et al, 2012). However, patient safety culture in dental health service has not been much research done (Leong, et al, 2008). RSGM Jenderal Soedirman University is a dental hospital that has been accredited and became a teaching hospital for clinical dental student. Surimi, et al (2018) in his study mentioned that the positive attitude of dental students to patient safety should be a concern for the faculty, so that this matter needs to be included in the curriculum learning.

2. MATERIAL AND METHOD

This research is a quantitative method of analytic research with cross-sectional conducted at the RSGM Jenderal Soedirman University in June 2019. The study population was clinical dental student in 1st till 4th year who had treated patients under supervision at RSGM Jenderal Soedirman University. The sampling technique using purposive sampling method that is random sampling technique in which researchers determine the sampling by setting specific criteria in accordance with the purpose of research. Respondents in this study amounted to 83 people which is calculated using the Slovin formula. Exclusion criteria from the study that students who have not yet started working on real patients. So that these criteria can ensure that the study participants had experience working in real environments and able to provide their perceptions of patient safety culture.

Questionnaire stating the purpose of research and information to students that their participation is voluntary. Students who participate are guaranteed that the data collected is used only for research purposes and to maintain their privacy as well as their confidence in giving feedback. Sheets informed consent expressed regarding the participant's right to withdraw from the study at any time without constraint. Participants can give feedback in one to two days after receiving the questionnaire. Participants who do not return the questionnaire within this time period then do drop out to avoid bias (Surimi, et al, 2018).

Questionnaire consisted of questions on student characteristics such as age, sex, and year of the grade. The questionnaire includes four variables consisting of patient safety culture (6 statement), openness of communication (7 statement), teamwork (6 statement), and organizational learning (6 questions). Response was assessed by 5 values Likert scale score of 1-5 (strongly disagree, disagree, neutral, agree, and strongly agree). Data analysis using SPSS with categorical variables such as student characteristics are presented as frequencies and percentages. Regression was used to identify significant factors that affect patient safety culture by using the statistical significance value of $p < 0.05$.

3. RESULT AND DISCUSSION

3.1 Respondent Data

This study is given to clinical dental students of the clinical dental student RSGM Jenderal Soedirman University as respondents. The amount of the questionnaire given to 83 respondent between clinical dental student in 1st till 4th year and returned a total of 100%. Questionnaire data presented in a pie chart in Figure 1 below.

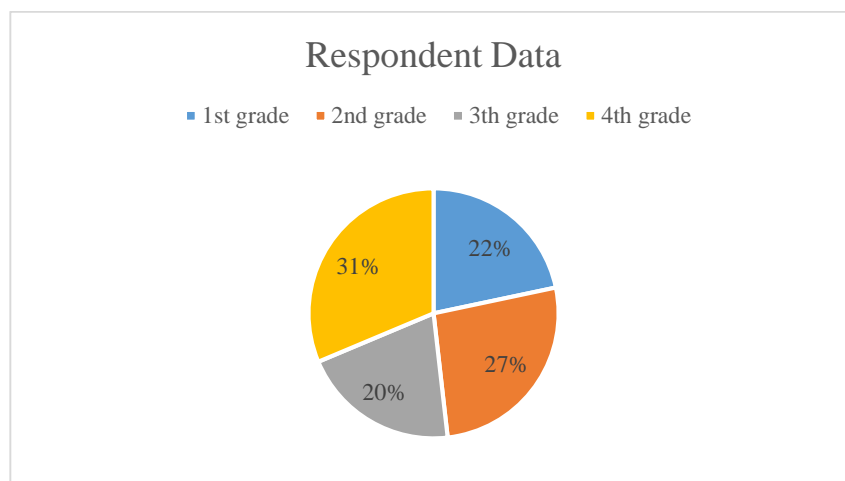


Figure 1. Respondent Data (n=83)

3.2 Validity Test

Validity test is done to do wheather the measuring instrument that have been prepared have validity or not. The results of validity test are presented in Table 1.

Table 1. Validity Test

No.		R count	R table	Description
Patient Safety Culture				
Y1.	Management commitment	0.630	0.361	valid
Y2.	Reward system	0.362	0.361	Valid
Y3.	The reporting system	0.626	0.361	Valid
Y4.	Identity of organization	0.685	0.361	Valid
Y5.	The reporting system	0.528	0.361	Valid
Y6.	Management commitment	0.547	0.361	Valid
Communication Openness				
X1.	Participation opportunities	0.507	0.361	valid
X2.	Freedom of speech	0.661	0.361	valid

X3.	Participation opportunities	0.561	0.361	valid
X4	Freedom of speech	0.510	0.361	valid
X5.	Participation opportunities	0.518	0.361	valid
X6.	Freedom of speech	0.465	0.361	valid
X7.	Psychological barriers	0.586	0.361	valid
Teamwork				
X8.	A common goal	0.806	0.361	valid
X9.	Clarity of roles	0.782	0.361	valid
X10.	Enthusiasm	0.844	0.361	valid
X11.	Effectiveness of communication	0.907	0.361	valid
X12.	Clarity of roles	0.892	0.361	valid
X13.	Conflict resolution	0.842	0.361	valid
Organizational Learning				
X14.	Common vision	0.758	0.361	valid
X15.	Learning team	0.785	0.361	valid
X16.	Systems thinking	0.777	0.361	valid
X17.	Mental models	0.632	0.361	valid
X18	Personal Skills	0.458	0.361	valid
X19.	Personal Skills	0.820	0.361	valid

Source: Primary Data 2019

Criteria for a valid measurement is if r count larger than r table at the 5% significance value (Arikunto, 2010). Based on the test results, the result of each item on the variable has r count larger than r tables (0.361). Therefore, the items on the questionnaire was valid and can be used to measure the variables in the study.

3.3 Reliability Test

Reliability test to determine whether the item statements in the questionnaire is reliable or not. The test results are presented in Table 2.

Table 2. Reliability Test

Variables	Cronbach Alpha	Description
Patient Safety Culture	0.711	Reliable
Disclosure Communication	0.604	Reliable
Teamwork	0.917	Reliable
Organizational Learning	0.570	Reliable

Source: Primary Data 2019

Table 2. shows that each variable has been reliable because α count > 0.349 . Reliability test results on patient safety culture variables $0.711 > 0.349$. Communication openness with r count $> r$ values (0.349). Teamwork variable has a value of $0.917 > 0.349$ and organizational learning has a value of r count $0.570 > 0.349$.

3.4 Data Distribution

Questionnaire which has been declared valid and reliable then be used for instruments in the study. Data distribution of each variable can be seen in Table 3 below.

Table 3. Data Distribution

Variables	Min	Mean	Max	SD	Coefficient of Variation
Patient Safety Culture	3	4.02	5	0.344	8.55%
Communication Openness	1	3.91	5	0.542	13.86%
Teamwork	3	4.19	5	0.375	8.94%
Organizational Learning	2	4.12	5	0.412	10.0%

Source: Primary Data 2019

According to the table above, all of the variables have scores more than 3 which shows the respondents agreed with all the statements submitted in the questionnaire. Lowest mean in communication openness and the greatest mean is the teamwork. The coefficient of variation shows the variation of the response from the respondent. Coefficient of variation data show that the openness of communication has the highest value (13.86%) and patient safety culture has the lowest (8.55%).

3.5 Regression Analysis

Data analyzed using SPSS 17.0 software to test the univariate analysis to describe the frequency distribution of each variable. After that, the multivariate analysis to determine the effect of communication openness (X_1), teamwork (X_2), organizational learning (X_3) as the independent variables toward patient safety culture (Y) as dependent variables.

Table 6. Regression Analysis

Dependent variable	Variables	t	Sig.	knot
Patient Safety Culture	(constant)	2,627	0.010	
	Communication Openness (X_1)	2,039	0.045	Significant
	Teamwork (X_2)	3,570	0.001	Significant
	Organizational Learning (X_3)	2,056	0.044	Significant
Rated R	0.656			
The R2	0.430			

adjusted R2	0.409
F	19.887
Sig. F	0.000

Source: Primary Data 2019

The hypothesis of the study is acceptable when the significant value of <0.05 . Based on regression analysis above, it can be seen that the communication openness significantly positive effect on patient safety culture (0.045). Teamwork significantly positive effect on patient safety culture (0.001). Organizational learning is significantly effect patient safety culture (0.044).

3.6 Discussion

Characteristics of respondents in this study is the clinical dental student in 1st till 4th year. In most are women (76%) and male respondents as much as 24%. Students taking care to patients include dental fillings, tooth extractions and other treatments. The average age of clinical dental student at the dental hospital is 23,1 years, whereas in young adulthood someone had developmental of physical condition. Setiowati (2017) showed age-related positive health workers and weak strength with the application of patient safety culture. These results are supported by Marpaung stating that there is a significant relationship between the age of health workers with a work culture where individuals are working. This workforce characteristics associated with the culture of the organization, the value of discipline, adherence to the rules, seniority and loyalty. Work experience someone here is professional students experience in working associated with the performance. Work experience someone here is professional students experience in working associated with the performance. This is in accordance with the opinion Absah (2008) that there is a relationship between health personnel working lives with the perception of patient safety.

Patient safety culture is a derivative of the work culture in the organization. Patient safety culture can be defined as a pattern of assumptions, values and norms of the members of the organization, unit or team, either directly or indirectly may affect the safety of the patient (Newell, 2008). Dimensions in patient safety culture in hospitals such as communication openness, teamwork and organizational learning. The higher the safety of the patient the better the quality of a hospital. This is because when the patient experienced an incident that will switch to another hospital, so that the culture of patient safety and hospital quality are positively correlated.

The first hypothesis in this study received, means of communication openness significantly positive effect on patient safety culture. Disclosure showed communication quality and safety is a priority in an organization and proven through the vision and mission of the hospital. Communication between members of the organization both in terms of patient safety could encourage mutual open. Being open about what happened and immediately discuss the security incidents that occur and empathy can help members of the organization in tackling the problem better. In addition, with regard to the role that facilitates management staff to understand the mission, direction, and the value of the organization. Roger et al (2003) defines communication is a process of moving an idea from one source to the receiver to change their behavior. Communication indicators assessed by the opportunity of participation, freedom of speech, and psychological barriers.

Clinical dental student has a high involvement in the discussion suggests that the participation rate is quite high. Fitriani (2009) states that in an organization requires high creativity in management, support and involvement of the members have a big role. Lestari (2015) suggest that the openness of communication statistically different results on the implementation of better services. Based on the research of the respondents had a mean response of 3.91 and a coefficient of variation of 13.86% with a minimum score of 1 and a maximum of 5. The variation of responses from respondents about the openness of communication is still quite large. Respondents who disagreed with the statement in a variable openness of communication, among others influenced

by the psychology of the individual barriers such as fear. Feelings of fear will cause people difficulty in conveying indormasi resulting in misinformation and result in ineffective communication. Being open about what happened and immediately discuss patient safety incidents that occurred in a complete and empathy can help cope with them better.

The second hypothesis in this study are also accepted, which means that teamwork has a significant influence on patient safety culture. Teamwork is the process of how people work together to achieve a goal (Heyman, 2010). Teamwork generate positive synergies through a coordinated effort. This may imply that the performance achieved by the team will be better than the performance perindividu within an organization or company. Research by Irviranti (2014) also showed that cooperation in the unit had the strongest influence on the culture of patient safety. Another study by Rachmawati (2011) also showed that teamwork has a positive and significant impact on the implementation of patient safety. Based on the data obtained that the mean value of teamwork that is 4.19 with the coefficient of variation of 8.84%. This means that the majority of respondents agree with all the statements submitted in the questionnaire teamwork. Good teamwork among the clinical dental student in the dental hospital because of the similarity of interest, enthusiasm, clarity of roles, effective communication and conflict resolution in the work environment that affect patient safety culture. Respondents felt teamwork is important to realize the safety of patients in hospitals. Team collaboration is needed between the medical team to improve patient safety with through the reduction of errors that may appear.

The third hypothesis is accepted where there is a significant influence of organizational learning on patient safety culture. Garvin (2000) defines organizational learning as organizational expertise in creating, acquiring, meninterpretasikan, transfer, and share knowledge to modify the behavior of patient safety. Baker (2005) argues that organizational learning emphasizes the use of the learning process on an individual level to transform the organization in a variety of ways to increase the satisfaction of stakeholders. If your organization has members who are competent and have the specific knowledge gained from their work or from formal education organization will benefit from the various activities of the educated individual. Organizational team and the mental models that have a positive image of the majority of respondents to benefit the organization as learning teams showed their ability to have insight into the thinking on important issues, the ability to play different roles in different teams, while the model of positive mental allows humans can work more quickly and accurately. Common vision on the respondents and good personal skills showed that respondents had a personal capacity who support towards organizational learning. Absah (2008) states that the potential and the capacity of individuals together through good cooperation capable of building and realizing the vision berdama to work together and transformed into a mental model of the organization. Based on the analysis of data obtained by the mean of organizational learning variable response by 4.12 with a minimum of 2 and maximum of 5 as well as the response of the coefficient of variation of 10%. These results indicate that there are differences of opinion among the respondents. Organizational learning is affected the culture of patient safety. The better of the organizational learning held by members can improve patient safety culture in the hospital.

4. CONCLUSION

The conclusions in this study include.

- a. Communication openness has a positive and significant effect on patient safety culture. The better of communication openness then the better of patient safety culture.
- b. Variable teamwork has a positive effect and dominant toward patient safety culture in dental hospital. The better the teamwork then the better the patient safety culture
- c. Variable organizational learning positively affects patient safety culture in dental hospital. The better the learning organization, then the better the patient safety culture.

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