



## THE EFFECT OF DOCTOR-NURSE COMMUNICATION ON PATIENT SAFETY CULTURE: STUDY IN ONE PRIVATE HOSPITAL IN MALANG

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### ABSTRACT

The complexity of health services in hospitals is a safety and safety risk in the form of Unexpected Events (KTD) or Nearly Accidental Events (KNC). One of the factors that can prevent KTD and KNC is doctor-nurse communication as the spearhead of health services in hospitals. This study aims to analyze the effect of doctor-nurse communication (openness, accuracy, timeliness, understanding) on patient safety in hospitals. The design of this research is a cross sectional study. Doctor-nurse communication was measured based on nurses' perceptions using a closed questionnaire. Respondents involved 40 nurses. Data were analyzed using multiple linear regression. The results of the analysis show that the doctor-nurse communication variable has an average of 2.92, meaning that it has been running well. Patient safety culture has an average value of 3.07, which means that patient safety is also going well. The results showed that the communication components (openness, accuracy, timeliness, understanding) did not have a significant effect (adjusted  $R^2 = 0.065$ ,  $p = 0.176$ ) on safety safety culture simultaneously or partially.

Keywords: communication; doctor; nurse; patient safety culture

### INTRODUCTION

The hospital as a health service center consisting of various professions has quite complex problems. This complexity is caused by the high integration between subsystems in hospitals and the profession in providing services to patients. The high complexity raises the risk of patient safety incidents, either Unexpected Events (KTD) or Nearly Accidental Events (KNC). Research by Manojlovich (2007) states that poor communication between doctors and nurses is one of the causes of unexpected incidents or events experienced by patients (37% include KTD and KNC). Communication is also key in creating a patient safety culture. Besides that, doctors and nurses are the two main professions that provide direct services (front line) in hospitals. The study was conducted to see the description of nurse doctor communication and its influence on patient safety culture.

### METHOD

The study was conducted at Wawa Husada Hospital (RSWH) Kepanjen Malang in March-April and was continued in October 2011 with a cross-sectional approach. Respondents in the study were nurses at the RSWH as many as 40 people. The variables measured were communication components (openness, accuracy, timeliness, understanding) and patient safety culture. Data obtained from the distribution of questionnaires and interviews conducted by researchers. A questionnaire to measure physician nurse communication was developed from Shortell & Rousseau (1989) and to measure patient safety culture was developed from the Agency for Health Care Research and Quality (2004). To analyze the effect of doctor-nurse communication on patient safety culture, multiple linear regression analysis was used (Wahyono 2006).

**RESULTS**

Respondents in this study were relatively homogeneous in terms of age and education. Age is dominated by the working productive age group between 21 years to 24 years (52.5%). The education level of the respondents is D III Nursing (100%). The majority of respondents are women as many as 26 people (90%) and have worked for more than 1 year (72.5%).

Tabel 1.  
Characteristics of Respondents

Characteristics	f	%
Age		
21-24 thn	21	52.5
25-28 thn	16	40
29-32 thn	3	7.5
Edification		
D III	40	100
Gender		
Women	36	90.0
Male	4	10.0
Working Time		
<1 thn	10	25.0%
> 1 thn	29	72.5%
not known (missing data)	1	2.5

Tabel 2.  
Deskripsi Rerata Skor Komunikasi Dokter-Perawat

	Mean	Std. Deviation	Minimum	Maximum
Openness	3.01	0.21	2.7	3.5
Accuracy	2.60	0.34	2	3.25
Timelines	3.19	0.41	2.25	4
Understanding	2.88	0.28	2.29	3.57
Rerata	2.92	0.31	2.31	3.58

The average value of the results of nurses' answers to the questionnaires distributed is that the value of cooperation in the unit (3.26), open communication (3.25) and feedback and communication (3.26) is above the average value (3.07). . Meanwhile, cooperation between units (3.01), handsoff (2.90), non-punitive response (2.75) and KTD/KNC reporting (3.03) were below the total average value.

Tabel 3.  
Description of Average Patient Safety Culture Score

	Mean	Std. Deviation	Minimum	Maximum
Cooperation between Units	3.01	0.32	2.25	3.5
Cooperation in Units	3.26	0.41	2.5	4
Patient Handover	2.90	0.46	2	4
Non punitive respons to Error	2.75	0.58	1.67	3.67
<i>Error reporting/ Reporting Unexpected</i>				
Events / Near Accidents	3.03	0.48	2	4
<i>Opennes Culture</i>	3.25	0.39	2.67	4
<i>Feedback Comunication</i>	3.26	0.54	1.33	4

### Doctor-Nurse with the Implementation of Patient Safety Culture

In this study, the analysis used is multiple linear regression analysis. This analysis was used to calculate the magnitude of the influence between the independent variables consisting of Openness (X1), Accuracy (X2), Timeliness (X3), Understanding (X4) on patient safety culture in RSWH.

Tabel 4.  
Multiple Linear Regression Analysis Results

Variabel	Koefisien regresi (b)	Std. error	Standardized Beta ( $\beta$ )	t <sub>hitung</sub>	Sig.	Keterangan
(Constant)	41.320	15.264		2.707	0.010	Signifikan
<i>Openness</i> (X1)	-0.032	0.457	-0.012	-0.071	0.944	Not Significant
<i>Accuracy</i> (X2)	-0.255	0.658	-0.062	-0.387	0.701	Not Significant
<i>Timelines</i> (X3)	0.717	0.615	0.211	1.166	0.252	Not Significant
<i>Understanding</i> (X4)	0.842	0.471	0.291	1.786	0.083	Not Significant
R	= 0.401					
R Square	= 0.161					
Adjusted R square	= 0.065					
F <sub>hitung</sub>	= 1.681					
Sign. F	= 0.176					
F tabel	= 3,245					
t tabel	= 2,024					
$\alpha$	= 0.05					

The value of the multiple correlation coefficient (Multiple R) is 0.401 (what does this number mean?) which states the degree of closeness of the relationship between patient safety culture in RSWH with Openness (X1), Accuracy (X2), Timeliness (X3), Understanding (X4). For the value of the coefficient of determination shows 0.161, while the coefficient of determination that has been corrected from the bias factor with the purpose of getting closer to the accuracy of the model in the population, Adjusted R Square = R<sup>2</sup>) is used, which is 0.065, which states the magnitude of the influence of the doctor-nurse communication component on patient safety culture in RSWH. This means that 6.5% of the diversity of patient safety culture in RSWH is influenced by the component of doctor-nurse communication. While the remaining 93.5% is determined by other factors outside the variables studied

### DISCUSSION

The results of this study indicate that from the concept of doctor-nurse communication which is described into 4 variables, namely openness, accuracy, timeliness, understanding overall has a good value. The openness and timeliness values have a good value above the average (Table 2). This is supported because most nurses have a working period of 3-5 years so they tend to be easier to communicate openly with doctors, while timeliness has a high enough value because almost all doctors at RSWH are part-time doctors, so in a short time nurses must immediately convey information on the patient's condition to the doctor.

Accuracy and understanding values have values below the average (Table 2), this is because nurses are dominated by women (90%) who have sensitive characteristics, are easily emotional and tend not to give proper answers to questions. which is quantitative, especially if the question is quite sensitive for them (Kertajaya, 2006). Meanwhile, understanding has a low score due to the limited time doctors are at the RSWH. Because all the doctors at the RSWH are part-time

doctors, hasty communication also limits the information conveyed. For patient safety culture, the values that are below the average are cooperation between units, handsoff, error reporting and non-punitive against errors. This is because nurses tend to be easier to work with people who have more in common with them and there is no form to hand over with patients. Meanwhile, error reporting and non-punitive have low scores because nurses are afraid to report KTD/KNC for fear that they will get sanctions. Therefore, RSWH needs to immediately implement and instill a patient safety culture in all aspects of the hospital.

This study shows that the component of doctor-nurse communication according to the nurse's perception does not have a significant influence on the patient safety culture in the RSWH. This finding is not in line with research by Manojlovich, et al (2007) who found that doctor-nurse communication is very important and affects patient safety, especially in intensive care rooms. Similar findings were also obtained by Vazirani's (2005) research that well-established doctor-nurse communication will create a conducive work climate in a hospital. This difference can be caused because patient safety culture is strongly influenced by leadership commitment. Gadd, et al (2002) stated that a patient safety culture will be formed if the leadership in the hospital sets an example, communicates it clearly and is committed to creating a patient safety culture. This finding is also supported by Keyton (2005) which states that a culture will be formed if all members of an organization accept a solution that provides a solution to problems that arise in daily practice. According to Simandjuntak, et al. (2002) the initiative to form an organizational culture comes from the leadership because they have the power to embed and strengthen the cultural aspects of the organization they lead. The three statements state that communication between leaders and subordinates influences the culture of patient safety more than the component of doctor-nurse communication. Gisburg, et al (2005) stated that values in patient safety culture should be instilled since the nurse's education period at a nursing academy or college.

Another fact that can explain the findings is the low intensity of communication between doctors and nurses. All doctors working at RSWH are visiting doctors and not permanent staff. This causes communication between doctors and nurses only for a short time when the doctor is present at the hospital, or if the patient experiences a change in condition, the nurse will contact the doctor by telephone to provide a report. Based on interviews conducted by researchers, nurses who are still new will not dare to communicate with doctors openly in the end the communication does not work effectively. In the previous researcher's statement that the committee or committee that specifically handled patient safety did not yet exist at the RSWH. The role of this committee is important in coordinating all health and non-health workers in hospitals to maintain a patient safety culture in hospitals. This is because this special committee must always organize trainings concerning patient safety for all medical, paramedical and non-medical personnel in the hospital. These factors may be the reason why in this study doctor-nurse communication is based on the nurse's perception

## **CONCLUSION**

Doctor-nurse communication that has been well established needs to be maintained, although accuracy and understanding are still weak. Meanwhile, for a patient safety culture that has also been running well, the values of cooperation between units, handsoff, non-punitive towards errors and error reporting need to be improved as key values in patient safety culture.

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