Quality Improvement Strategy for Interns Doctor Services in the Emergency Unit

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Abstract: In an effort to meet the needs of doctors and prepare good quality doctors in their fields, the government is organizing an internal program. The level of patient satisfaction is still quite low on the services of interns doctors. Patients assume that the intern is only a junior practitioner who is still in training and is still in the stage of developing competencies. This study aims to improve the quality of service and customer value to the image of services in the emergency department. This research is a quantitative research with an explanatory research approach with a total sample of 30 people. Data collection was carried out using a questionnaire. Data were analyzed using Pearson product moment correlation test and multiple linear regression test. From the correlation test results obtained by the correlation coefficient (r) on the reliability variable (r 0,701; p 0,000), responsiveness (r 0,645; p 0,000), guarantee (r 0,555; p 0,001), and empathy (r 0,529; p 0,003) . Statistically proven that there was an influence of reliability, responsiveness, assurance and empathy of interns doctors on patient satisfaction in the ER.

1 INTRODUCTION

The quality of health services must embody the highest level of quality as it deals with patients' lives. Doctors as medical personnel and contact point for patients must be of certain quality. In addition, the quantity of the doctors must be in proportion to the number of patients as this is to prevent work overload and providing quality services to the patients (Supartiningsih, 2017).

The number of doctors in Indonesia is currently insufficient. The 2016 Indonesian Medical Council referenced that the ratio of doctors to residents in Indonesia is 1 doctor to 2,770 residents. This ratio is higher than the ideal ratio according to World Health Organization (WHO) standards, namely 1 doctor for 2,500 population (Indonesian Medical Council, 2016). That is, one doctor in Indonesia has to cater to an additional rough amount of 270 patients in Indonesia.

In an effort to increase the numbers of doctors and to prepare qualified doctors in the field, the government represented through the Indonesian Doctors Internship Committee (IDIC) organizes an Internship Program. This internship program is an apprenticeship program for doctors who have just completed their professional education who aim to practically apply their knowledge in an integrated, comprehensive, independent manner). Also, by using family medicine approach in understanding and aligning theoretical knowledge with practice in the field.

Countries that have already implemented this program stated that internships are an integral part of medical education. Internship can last from one year to several years. It is also an initial part of education in obtaining specialist degree or in obtaining practice rights as a general practitioner or as a family doctor (Binenbaum, Musick and Ross, 2007). In Indonesia, doctors in undergoing an internship program have duties in accordance with Doctor Competency Standards covering seven areas, namely: 1) noble professionalism; 2) self-awareness and self-development; 3) effective communication; 4) information management; 5) the scientific foundation of medical science; 6) clinical skills and 7) management of health problems (Indonesian Medical Council, 2012).

The quality of health services in a health service must almost always be able to satisfy the patient, this is often referred to as quality service. The quality of health services usually refers to the ability of hospitals, to provide services that are in accordance

with the standards of the health profession and are acceptable to their patients. Azwar (1996) defines the quality of health services as showing the level of perfection of health services in causing satisfaction to every patient. The higher the satisfaction level, the better the quality of health/ medical services (Supartiningsih, 2017).

Satisfied patients are valuable asset to the hospital as they may continuously uses the services and may refer to others about their experiences. Likewise, if patients feel dissatisfied, they will tell others twice as great about their bad experiences. Customer satisfaction has become a central concept in business and management discourse (Tjiptono and Chandra, 2016; Wijaya et al, 2019). Service quality is centered on efforts to meet the needs and desires of customers and the accuracy of delivery to offset customer expectations (Supranto, 2015).

The demand for high quality doctor's services coupled with the complexity of the medical sciences is highly sought after. Especially in the emergency department, within a limited time, doctors are required to perform well under pressure. Emergency services must be met with efficiency and effectiveness. Doctors aim to save as many patients who come to the emergency room within shortest possible time. Conceptualizing theories, quick decisions and executing actions are required during crucial. This is of upmost importance to avoid errors that may be detrimental.

Doctor's quality services can be assessed through several benchmarks, such as reliability, (work consistency), trustworthiness (willingness or readiness to provide services), knowledgeable, courteous and most importantly, being able to empathize on the patients' situation (Parasuraman et al, 1994; Turnip et al, 2020).

Over the years increasing patient satisfaction has been the primary goal of a healthcare business organization. Patients' satisfaction affects customer retention rate and company's market share. Thus, achieving high levels of patient satisfaction in health care is of high importance. Previous studies dedicated in learning how to increase satisfaction in health care settings focused on gaining better knowledge about the doctor-patient relationship and how it affects patient satisfaction (Al-Neyadi, Abdallah and Malik, 2018).

By improving the quality of doctor's services, higher patient satisfaction is expected to be achieved. This may result in better image of hospital and subsequently increases patient visits. A study conducted by Rizal shows that service quality influences patient satisfaction in the dimensions of

responsiveness, assurance, and direct evidence (Rizal, Suardi and Yulihasri, 2017). The limitation of this study is it only focuses on the quality of doctor's services while the dependent variable is patient satisfaction.

Maqsood's study found that better quality health care had a positive effect on patient satisfaction and actions. The results found that for every hospital that provides good service, there is a higher referral rate as patients will recommend their friends and neighbors to visit (Maqsood, M., Maqsood, H., Kousar, R., Jabeen, C., Waqas, A. & Aman, 2017). The difference with this study is it only focusses services quality as independent variable and patients' satisfaction level as dependent variable.

Research at Dr Kariadi Hospital Semarang found that there was a significant positive relationship between the quality of service for practicing physicians and the satisfaction of outpatients using BPJS Health card users. This means that the higher the quality of service for practicing doctors, the higher customer satisfaction for outpatients using BPJS Health cards (Adelia and Nurtjahjanti, 2016). The difference with this study lies in the subject that is being examined. While previous study focusses on the outpatient, the subject of this study focusses on ER patients.

Research at a Korean hospital found that physician performance and quality of service procedures are positive factors that contribute positively on effectiveness of treatments. That is, should the patients experienced effectiveness and satisfaction of a treatment, they are more likely to continuously visit again (Kim et al., 2017). The previous study only focusses on service quality as independent variable and it's impact on patient's satisfaction. In addition, the variable dependent that the previous study focuses on is doctor's performance and hospital's service procedure and its impact in effectiveness of treatment.

Research in three hospitals in Pakistan found that physician behavior significantly moderates the effect of health care services on patient satisfaction Manzoor assessed patient satisfaction on the quality of doctor services through the doctor's behavior as a moderator for patients (Manzoor et al., 2019).

In addition, research at Kavala General Hospital, Greece examines the quality of physician services based on 5 dimensions of quality (5Q) health services, namely reliability, responsiveness, assurance, empathy and physical evidence (tangible). It was found that the overall five dimensions had a significant impact on patient satisfaction in the hospital. These dimensions are on a hierarchical

scale: clinical care, social responsibility, staff quality, infrastructure and hospital reliability (Vasiliki, A. G. & Maditinos, 2017). In contrast to this study, this paper aims to examine the quality of service based on 4 dimensions according to Parasuraman namely reliability, responsiveness, assurance and empathy did not include dimensions of physical evidence.

2 METHOD

This study is performed based on quantitative research with an explanatory research approach carried out at RSU Royal Prima Medan. Samples were taken on30 respondents family companion patients in the emergency unit. Data is collected through distributing questionnaires containing 5 items each about the independent variables. That is, (reliability, responsiveness, assurance and empathy) with alternative answers according to the Liker Scale ranging from strongly disagree, disagree, simply agree, agree and strongly agree, It is also equipped with five items about the variable dependent (family satisfaction companion patient) with alternative answers very unsatisfactory, unsatisfactory, satisfying enough, satisfying and very satisfying.

Questionnaires were distributed in the first and second week of December and validity and reliability tests had been carried out on 30 respondents from the accompanying patient family of Murni Teguh Memorial Hospital Medan who visited the emergency room. The validity test results using the Rhitung coefficient values in the range 0.644-0.992> Rtable = 0.361, it is assumed that the data is normally distributed. The results of the Cronbach's Alphahitung value were in the range of 0.887-0.955> 0.7; assumed a reliable questionnaire as shown in Table 1. V is Variable, K is Reliability, DT is Responsiveness, J is Guarantee, E is Empathy, BP is Item Statement, CI-CT is Corrected Item-Total Correlation, CA is Cronbach's Alpha, and Ket is Remarks.

Data processing through the stages of collecting, checking, coding, entering and processing. Data were analyzed bivariately using the Pearson product moment correlation test and multivariately with multiple linear regression tests. The research procedure as in Figure 1.

Table 1. Results of Test Validity and Reliability of the Research Questionnaire

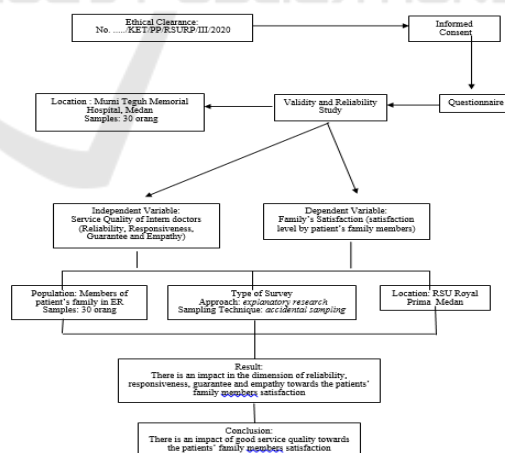| No	V	BP	$CI-TC$	CA	Ket
1.	K			0,887	Reliabel
		1	0,906		Valid
		2	0,644		Valid
		3	0,662		Valid
		4	0,756		Valid
		5	0,736		Valid
2.	DT			0,955	Reliabel
		1	0,910		Valid
		2	0,886		Valid
		3	0,918		Valid
		4	0,945		Valid
		5	0,747		Valid
3.	J			0,939	Reliabel
		1	0,902		Valid
		2	0,822		Valid
		3	0,777		Valid
		4	0,843		Valid
		5	0,862		Valid
4.	E			0,945	
		1	0,768		Valid
		2	0,785		Valid
		3	0,882		Valid
		4	0,992		Valid
		5	0,859		Valid

Figure 1. Procedure of research process

3 RESULTS AND DISCUSSIONS

Characteristics of respondents involved were the family of patients' companions based on age, the

majority aged between 31-40 years, the majority were men, the majority were high school educators, the majority worked as employees and relationships with patients were the majority of children from patients. More clearly can be seen as in Table 2.

Table 2. Characteristics of respondents

Characteristics	n=30	%
Age (years)		
<30	2	6,7
31-40	14	46,6
41-50	9	30,0
>50	5	16,7
Sex		
Female	13	43,3
Male	17	56,7
Education		
Midle high	2	6,7
High high	20	66,6
Undergraduate	8	26,7
Occupation		
House Wife	10	33,3
Employee	13	43,4
Entrepreneur	6	20,0
Unemployed	1	3,3
Relationship with patients		
Child	17	56,7
Parents	9	30,0
Sibling	4	13,3

The results of the questionnaire measurement of research variables are the quality of health services (reliability, responsiveness, assurance, empathy) and family satisfaction of patient companions as shown in Figure 2. Where, V is variables, R is reliability, RP is responsiveness, G is guarantee, E is Emphaty, and FS is Family Satisfaction.

Based on bivariate analysis, the relationship between the quality of interns physician services (reliability, responsiveness, assurance and empathy) with patient satisfaction was analyzed using the Pearson product moment correlation test with a significance level (α) = 0.05. The results of bivariate analysis obtained correlation coefficient (r) on the reliability (r 0,701; p 0,000), responsiveness (r 0,645; p 0,000), guarantee (r 0.555; p 0,001), and empathy variables (r 0.529; p 0.003).
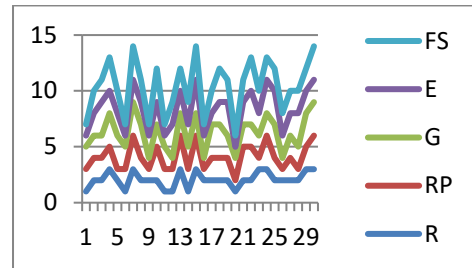

Figure 2: Recorded data from questionnaire with 30 respondent.

The independent variable has a probability value smaller than α 0.015. This means that the quality variables of interns physician services consists of aspects of reliability, responsiveness, guarantee (assurance) , and empathy related to patient satisfaction. The strength of the relationship between variables based on the correlation coefficient indicates that the reliability and responsiveness variables were strong while the guarantee and empathy were moderate. The coefficient r was a strong relationship with intervals of 0.600-0.799 and moderate 0.40-0.599 (Sugiyono, 2014). More clearly, pearson correlation and significance is shown in Table 3.

Table 3: Product Moment correlation test results.

Variabeles	Pearson correlation (r)	Significance (p)
Reliability	0,701	0,000
Responsiveness	0,645	0,000
Guarantee	0,555	0,001
Emphaty	0,529*	0,003

The calculation results of the *Kolmogorov-Smirnov* One-Sample Test obtained the *Asymp value. Sig. (2-tailed) Unstandardized Residual* that was 0.655> 0.05, it can be said that the variables of reliability, responsiveness, guarantee (assurance), and empathy are normally distributed. The results of the multiple linear regression test with the Enter method for each internship physician service quality variables in the form of reliability, responsiveness, assurance, and empathy obtained that the relationship between variables can be described in the multiple linear regression equation in the form of:

$$Y = -4,396 + 0,272X1 + 0,277X2 + 0,377X3 + 0,354X4$$

where, Y is the family patient satisfaction; α is a constant; $\beta1$ ... $\beta4$ are the regression coefficient; X1 is reliability; X2 is responsive; X3 is a guarantee; and X4 is empathy. The results is shown in Table 4.

Table 4. Results of the hypothesis through Coefficients (a) test

Variables	β	Sig.
Constant	-4,396	0,015
Reliability	0,272	0,003
Responsiveness	0,277	0,001
Guarantee	0,377	0,000
Emphaty	0,354	0,000

The coefficient value β in Table 4 for each variable, implies that each increase in internal physician for each variable tested will result in an increase in patient satisfaction by the value of the coefficient. For example, the coefficient value of responsiveness β was 0.277, which means that any increase in the responsiveness of interns will result in an increase in patient satisfaction of 0.277, and so on. The biggest coefficient β value was the guarantee variable, then the variable is the dominant factor affecting patient satisfaction.

In the determination test results obtained correlation coefficient (R) was 0.918 and the correlation coefficient of determination (*R Square*) of 0.843 which means 84.3% of the variation of independent variables (reliability, responsiveness, guarantee (assurance) and empathy) was able to explain the dependent variable, namely patient satisfaction.

The coefficient of determination (R2) basically measures how far the ability of the regression model in explaining the variation of the dependent variable. The small coefficient of determination (R2) means that the ability of the independent variables in explaining the variation of the dependent variable is very limited. A value close to one means that the independent variables provide almost all the information needed to predict the variation of the dependent variable.

The results of the bivariate analysis of the four variables (reliability, responsiveness, assurance and empathy) were related to patient satisfaction and all four variables were included in the multivariate analysis (p <0.25). The results showed that there was a positive influence between the reliability of interns physicians on patient satisfaction. Based on the results of multiple linear regression tests obtained p value 0.003 <0.05 means there was an influence on the reliability of interns physicians on patient satisfaction.

Based on the assessment of patients in the emergency department that there is still a lack of quality in doctor's service. This is evident in the reliability aspect gathered from the respondent's answer to the statement on the questionnaire that the doctor did not provide clear health information desired by the patient so that the patient was not satisfied with the results of the service he received. Patient also stated at certain times doctors were in a rush while doing examination and the patient did not dare to ask further about his condition.

Reliability relates to the ability of human resources to provide accurate services from the first time without any mistakes and prepare services according to the agreed time (Lupiyoadi and Hamdani, 2011). Research at *RSUP* Dr. Kariadi Semarang shows that there is a significant positive relationship between the quality of doctor's practice services. This means that the higher the quality of doctor's practice services, the higher the satisfaction of outpatients consumers using *BPJS* Health cards. The quality of doctor practice services contributes 41.4% effectively to the outpatient consumer satisfaction of users of the *BPJS* Health card (Adelia and Nurtjahjanti, 2016). Research at the Embung Fatimah Regional General Hospital in Batam City found reliability factors influence patient satisfaction with specialist doctor services in the Outpatient Installation (Vonikartika et al., 2018).

The results showed that there was an influence on the responsiveness of interns doctors to patient satisfaction. Based on the results of multiple linear regression test p values obtained 0.001 <0.05 means that there was an influence on the responsiveness of interns doctors to patient satisfaction. In other words the more responsive the doctor, the patient satisfaction also increases. The result found doctors has a poor level of responsiveness, evidenced by respondents' answers to the statement on the questionnaire that doctors has a limited time in serving patients. This can be due to the high workload of a doctor especially at night conditions.

The results of this study are similar to the research at Dr. RSUPN Cipto Mangunkusumo Jakarta who found that the quality of hospital services, especially in class 2 inpatient care in building A, had a significant influence on customer satisfaction, both at the level of performance and level of expectation (Jaya and Syarufuddin, 2015).

Responsiveness is doctor's ability and willingness in helping patients and in responding to patient requests. This includes informing matters relating to the patient's condition (Lupiyoadi and Hamdani, 2011). While doctor aims to provide quality services to the patients, they are often burdened by their own work conditions. For example, doctors are expected to cover nightshifts in hospitals which may lead in lower productivity. This is evidenced by the Patmoko

(2015) which stated that lower productivity is prevalent while working at night compared to working during daytime. Absenteeism during morning shifts is high if workers had to work the night before. Work absenteeism in the second week of work shifts on a biweekly work shift system is higher than work shifts in the first week. Absent work at work shifts in the afternoon and on a four-week work shift system (Patmoko, 2015). The constant changes in shifts affects doctor's work performances which consequently affects quality of services and patients' satisfaction.

The results showed that there was an effect of interns' doctor's guarantee (assurance) on patient satisfaction. Based on the results of multiple linear regression tests obtained p value of 0,000 <0.05 means that there is an influence of interns doctor's guarantee on patient satisfaction. In other words the better the guarantee given by the doctor, the patient's satisfaction also increases. But still found doctors with poor level of assurance, this can be caused by a high doctor's imbalanced workload .An overload of medical staff can also occur if the number of nurses on duty to help in hospital emergency departments is not proportional to the number of patients admitted. Based on the statement of the patient in the emergency department, the quality of the doctor was still lacking from the aspect of collateral, as evidenced by the patient's answer that the doctor's explanation of the actions taken on the patient was still poorly understood by the patient and the safety guarantee expected by the patient was also not yet optimal.

In terms of service procedure in a hospital, patients who will be treated will be accepted by local health workers both inpatient care, outpatient care (polyclinic) and in the emergency department. This procedure is the initial key to the service of hospital health workers in serving patients properly or not, viewed from a friendly attitude, polite, orderly, and full of responsibility (Ministry of Health, 2011). A study conducted by Supartiningsih found that the assurance variable had a positive and significant effect on outpatient satisfaction. This can be interpreted if the trustworthy nature of the employee increases, patient satisfaction will also increase (Supartiningsih, 2017). The behavior of the employees in this case interns doctors are able to foster patient confidence in the hospital if the hospital can create a sense of security for patients. In addition, assurance means that doctors are always polite and master the knowledge and skills needed to deal with patients.

The results showed that there was an empathy effect of interns doctors on patient satisfaction in the emergency department. Based on the results of multiple linear regression tests obtained p value of 0,000 <0.05 means that there is an influence of empathy interns physicians on patient satisfaction. In other words, the better the empathy given by the doctor, the patient's satisfaction will also increase. However, in many cases it has been found that the empathy level by doctors has not reached the desired level. This may be due to high volume of patient visits and night visits. Doctors may be overwhelmed to serve patients especially if the number of nurses who served in the emergency unit is not equivalent to the needs. Based on the patient's statement in the emergency unit that there is still a lack of quality of the doctor's service from the aspect of empathy evident from the patient's response that the doctor seems less friendly to the patient and did not take time to detail on the patient's condition. Doctors are less trying to calm the patient's anxiety about the illness.

Research at RSUD Dr. Achmad Darwis Padang found that there was a significant relationship between reliability, responsiveness, confidence, empathy and physical evidence with patient satisfaction in the Outpatient Polyclinic. The most influential variable is the quality of nurse services. Suggestions for improvement are aimed more at improving service systems in outpatient polyclinics and improving the quality and quantity of human resources and renovating service buildings in outpatient polyclinics (Rensiner, Azwar and Putra, 2018).

Patient satisfaction in the emergency unit found that patients were dissatisfied with most emergency services provided such as administrative services at the front desk, service times, facilities, nursing services, doctor services, cleaning and billing procedures. Therefore, it is concluded that there is a gap between perceptions and expezzctations of emergency services provided to patients. The company understands the problemzzzzzs of its customers and acts in the interests of consumers, and gives personal attention to consumers and has comfortable operating hours. Associated with services in hospitals that interns doctors should act in the best interests of patients and try to give personal attention to patients.

4 CONCLUSIONS

This study found that statistically there was an influence on the quality of interns physician services on patient satisfaction. With each correlation coefficient (r) the reliability variable (r 0,701; p 0,000), responsiveness (r 0,645; p 0,000), guarantee (r 0.555; p 0,001), and empathy (r 0.529; p 0.003).

Statistically proven that there was an influence of reliability, responsiveness, assurance and empathy of interns doctors on patient satisfaction in the emergency unit. The strategy to improve the quality of interns can be realized through increasing the reliability, responsiveness, assurance and empathy of doctors through supervision by hospital management and accompanying doctors.

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