

Relationship of Reliability, Responsiveness, and Nurse Empathy to Inpatient Satisfaction

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Abstract: Survey of patient satisfaction about unprofessional nurses providing in services still often sound unfriendly and inattentive to their patients. Nurses in quantity are the most workers in the hospital, amounting to 60.55% and providing 24-hour services directly related to patients. The purpose of this study was to analyze the relationship of reliability, responsiveness, and empathy towards inpatient satisfaction. This research was an analytic study with cross sectional approach, with a population of 865 people and a sample of 190 respondents. The tools used in this research were instruments (questionnaires) that have been tested for validity and reliability. Furthermore, data were processed using univariate analysis, bivariate with chi-square test, and multivariate with multiple logistic regression at a 95% confidence level ($\alpha = 0.05$). The results showed that the variables of reliability, responsiveness, and empathy were significantly associated with inpatient satisfaction, $p < 0.05$. The most significant variable related to inpatient satisfaction was empathy with Exp (B) / OR = 8,132 meaning that patients who stated that nurses empathized had a chance of being satisfied 8.1 times higher than patients who stated nurses lack empathy.

1 INTRODUCTION

The Ministry of Health has issued regulations that determine patient satisfaction standards in health services that are set nationally. Based on the Regulation of the Ministry of Health of the Republic of Indonesia in 2016 concerning minimum service standards for patient satisfaction that is above 95% (Ministry of Health Republic of Indonesia, 2016). Health services with a level of patient satisfaction <95% are considered not to meet minimum standards or are not satisfactory.

Patient satisfaction surveys about officers who are not professional in providing health services are still often heard (complains officers which are not friendly and lack attention to their patients) (Isnindar, Saputra, & Robiyanto, 2018).

The quality of nursing care services provided to inpatients can be assessed based on the service quality theory developed by Parasuraman, Zeithaml, and Berry which consists of dimensions of physical evidence (tangibles), reliability (reliability), responsiveness (responsiveness), assurance (assurance), and empathy (empathy) (Tjiptono and Chandra, 2015). In their study the quality of service

studied is related to reliability, responsiveness, and empathy.

According to Griffith (2017), in order to increase loyalty can be done by adding value to what is offered. Adding value can be done in ways such as increasing the speed and responsiveness of service. (Yu and Kirk 2009) Empathy is considered essential to the provision of quality care. Research by Simbala et al. (2013) shows a probability value of ($p = 0.001 < 0.05$) which means there is a significant relationship between nurse empathy services and patient satisfaction.

Research Purwanti, Prastiwi, & Rosdiana (2017) found that good service provided by nurses from empathy factors almost all patients felt nurses lack understanding of patient problems such as giving personal attention to asking complaints experienced by patients. "Being empathic has a significant place in nursing within the therapeutic relationship. The studies reviewed demonstrated that it is possible to increase nurse's empathic ability from a range of clinical specialties and at both undergraduate and postgraduate levels." (Brunero and Coates 2010).

Al-Damen's research results (2017) in Jordan show that there is an impact of perceived health service quality on overall patient satisfaction.

Reliability has the most influence, followed by empathy and assurance. Ozlii and Uzun, (2015) found that there were differences in patient satisfaction in various hospitals in Turkey related to the educational background, profession, hospital where the patient lived and previous hospital experience. Shan et al. (2016) found a lack of trust as a source of patient dissatisfaction in Heilongjiang, China. Devi and Muthuswamy (2016) who examined in India, found that physical evidence, reliability and responsiveness were the three most important dimensions in increasing patient satisfaction. Cunico, *et al*, (2012). Empathy is the quality responsible for creating a caring environment. Several nursing theorists have identified empathy as a crucial component of caring. Yousapronpaiboon and Johnson (2013), who examined in Thai private hospitals, found that assurance is the most dominant dimension, followed by empathy, responsiveness, tangibles and reliability in influencing patient satisfaction. The service quality dimensions Empathy of nursing staff and Assurance impact positively on both Loyalty and Cumulative satisfaction (Gray and Boshoff, 2004.)

Furthermore, research (Essiam, 2013) examining in state university hospitals in Ghana obtained results that patient satisfaction is best explained by responsive variables, followed by variables of empathy, assurance, physical evidence, and reliability.

Dissatisfaction felt by patients related to nurse services which sometimes comes a long time when called, nurses often play mobile phones, nurses are less friendly, nurses less explain about the treatment of illness in patients. This indicates that the performance of some nurses is still not satisfying the patient and family. One of the most important factors for patient survival is to keep using hospital services or encourage others to come to the same hospital depending on the level of patient satisfaction in getting services from the performance of nurses, especially patients and families get services in the inpatient room.

Based on the description above, the researcher is interested in taking the title “Relationship Of Reliability, Responsiveness, And Nurse Empathy To Inpatient Satisfaction”

It is increasingly important that nursing care be associated with measurable patient outcomes. A correlational study examined relationships between nurse-expressed empathy and two patient outcomes: patient perceived empathy and patient distress. (Olson, 1995).

2 METHOD

This research was conducted at Stella Maris Hospital in Medan in November 2019. The study population was all inpatients with an average of 865 people per month, and samples were obtained as many as 190 people. The research sampling technique was accidental sampling. Characteristics of the majority of respondents aged <39 years (50.5%), aged > 39 years (49.5%), all women (100.0%), educated diploma (48.9%), minority educated high school people (21, 1%). The majority of respondents were private employees (40.0%), a minority worked as housewives (8.4%). Based on the length of stay, the majority had been treated for 2 days (45.3%), the minority had been treated for 4 days (25.8%). Data was collected by distributing questionnaires to inpatients who will go home as in Figure 1.

Univariate data analysis, bivariate using chi-square test, and multivariate using multiple logistic regression tests with a confidence level of 95%. The research instrument was a questionnaire that had been tested for validity and reliability with a sample of 20 people at Sarah's Hospital. The result was that all instruments are valid (> 0,361) and reliable (> 0,600) as shown in Table 1.

Univariate data analysis, bivariate using chi-square test, and multivariate using multiple logistic regression tests with a confidence level of 95% were applied. Multiple logistic regression is a multiple regression model if the dependent variable is dichotomous data. Dichotomy means in the form of categories with a total of 2 categories. The scheme of entire reseach proses is decribed n Figure 1.

Table 1: Validity and reliability test results.

No	Variables	r-count	r-table	Cronbach Alpha
1	Reliability 1-10	0.436	0.361	0.733
2	Responsiveness 1-10	0.465	0.361	0.725
3	Empathy 1-10	0.505	0.361	0.739
4	Patient Satisfaction 1-10	0.532	0.361	0.745

Based on figure 1, the research process begins with a sample application for approval to each respondent through filling out the consent form. After getting approval, the respondents filled out a research questionnaire where the questionnaire had been tested for its validity and reliability at Sarah's hospital to 20 respondents. The questionnaire consists of independent variables (reliability, responsiveness, empathy) and dependent variables (Inpatient

Satisfaction). The study population was 865 people located at Stella Maris Hospital. The sample is part of the population and with the Lameshow formula, a sample of 190 people is obtained. This research is an analytical study with a cross sectional approach. The data analysis methods used were univariate, bivariate (Chi Square), and multivariate (Multiple Logistic Regression). The result of multivariate analysis with multiple logistic regression test shows that 3 variables, namely reliability, responsiveness and empathy are all related to patient satisfaction, where empathy is the variable that has the greatest relationship with inpatient satisfaction.

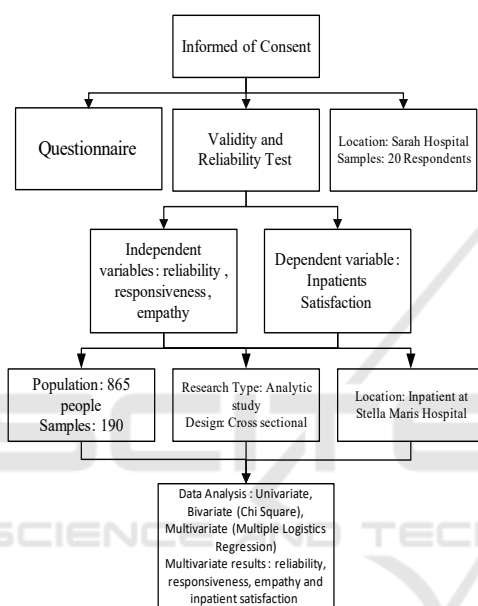


Figure 1: The Scheme of the Research Process.

3 RESULT AND DISCUSSIONS

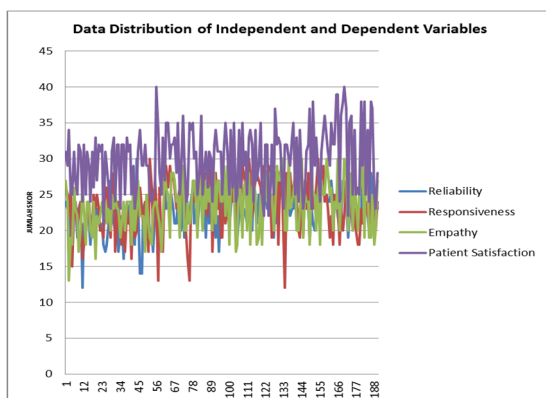


Figure 2. Data of recorded questionnaire data from 190 respondents.

Figure 2 was the measured data of each variable from the questionnaire instrument. In the Figure 2. X and Y axis are indicates the number of scores respondents, respectively. Independent and dependent variables data distribution shows that the mean value of reliability was 22, Responsiveness was 23, empathy was 24, and patient satisfaction was 30. All the results of the questionnaire were plotted according to the variable namely: reliability, Responsiveness, empathy, and satisfaction with each of 10 questions (the option in the questionnaire were Yes (score 3), Sometimes (score 2), and No (score 1)). The lowest score was 10, the highest score was 30. Good if score 21 - 30 (category 1) and Less if score 10-20 (category 0). As for Patient Satisfaction variable with 10 questions with answer choices Very Satisfied (score 4), Satisfied (score 3), dissatisfied (score 2), Very Dissatisfied (score 1), the lowest score was 10 and the highest score was 40, so it says Satisfied: if the results are 26-40 (category 1), Less Satisfied 10 - 25 (category 0).

Found some differences in the results of the respondents' scores for each variable, among others: Reliability variable, the lowest score is 12. This result was because during the treatment period respondents did not get nurses who were always responsive when need in help, did not pay attention to cleanliness of the body and the area of the inpatient ward, less do infusion control and sometimes do not routinely check health conditions, likewise drug administration is not timely while the highest score was 30 where respondents get reliable nurse services which were always responsive to all tested variables.

Responsibility variable found the lowest score was 15, this is likely due to nurses never discussing about health conditions, illness or continued care at home, not checking health conditions, not providing moral support, sometimes even nurses want to show cooperation and want to help if needed. While the highest score was 30, where nurses are quick to respond to the complaints and the needs of respondents. The Empathy variable found to be the lowest score was 13, this is due to the nurses not showing a sense of empathy towards the respondent, only inviting communication about conditions but not explaining their rights and obligations as well as regulatory rules and not even asking for approval of every action to be performed, explaining the procedure difficult to understand, answering questions that do not match the answers, even do not treat with friendly and polite so that patients feel uncomfortable. While the highest score was 30 where a nurse has carried out her services with empathy through good communication, explaining in language

that was easy to understand both about the rules, rights and obligations, all actions are asked for approval, full of courtesy and courtesy, each communicates a feeling of security and comfortable. In the variable patient satisfaction found the lowest score was 22, this is still found in hospitalization, especially nursing services that are not reliable, unresponsive and not empathetic in carrying out their daily work, while the high score was 40 where a nurse in his service has includes nurses who are reliable, responsive and empathetic so that respondents feel comfortable and safe.

Based on the univariate analysis, the results showed that the majority of respondents grade the reliability, responsiveness, and empathy with good were ranged between 72.1% -76.3%, while those that stated were not good between 23.7% -27.9%. For the satisfaction variable, 74.7% of satisfied inpatients and 25.3% less satisfied, as shown in

Table 2: Variable Frequency Distribution (n = 190).

Variables	Quantity	
	N	%
<i>Reliability:</i>		
Good	145	76,3
Not Good	45	23,7
<i>Responsiveness:</i>		
Good	144	75,8
Not Good	46	24,2
<i>Empathy:</i>		
Good	137	72,1
Not Good	53	27,9
Satisfactions		
Satisfied	142	74,7
Not Satisfied	48	25,3

Furthermore, based on the results of the bivariate analysis, all independent variables were significantly related to inpatient satisfaction, namely reliability (p = 0.021), responsiveness (p = 0.016), and empathy (p = 0.001). The complete Chi-Square statistical test results can be seen in Table 3.

Table 3: Relationship of Each Independent and Dependent Variables.

Variables	Patient Satisfaction				Qty		p-value
	Satisfied		Not Satisfied		N	%	
	n	%	n	%			
<i>Reliability:</i>							0,021
Good	124	85,5	21	14,5	145	100	
Not Good	18	40,0	27	60,0	45	100	
<i>Responsiveness:</i>							0,016
Good	124	86,1	20	13,9	144	100	
Not Good	18	39,1	28	60,9	46	100	
<i>empathy:</i>							0,001
Good	121	88,3	16	11,7	137	100	
Not Good	21	39,6	32	60,4	53	100	

The results of multivariate analysis with multiple logistic regression tests showed that about 3 variables as model candidates, all were related to inpatient satisfaction which area reliability, responsiveness, and empathy as in Table 4 (B is beta value, sig. (significant), Exp (B) was exponential beta is read as an OR (Odds ratio) value, and 95% CI for exp (B) was a 95% confidence level for exponential beta values for the upper and lower limits).

The variable that has the greatest relationship with patient satisfaction for inpatients was the empathy variable which has a value of Exp (B) / OR = 8.132 by mean that patients who have empathy were good nurses, have the opportunity to feel satisfied by 8.1 times higher than patients who expressed empathy nurses were not good.

The variable responsiveness (responsiveness) which has a value of exp (B) / OR = 7.483 means that patients with good nurse responsiveness have a 7.8 times higher chance of being satisfied than patients who think that nurses' responsiveness is not good.

The variable reliability (reliability) which has a value of Exp (B) / OR = 4.973 means that patients who say the reliability of nurses are good, have a chance to feel satisfied by 4.9 times higher than patients who say that their reliability is not good.

Table 4: Results of Multiple Logistic Regression Tests.

Variable	B	Sig.	Exp(B)	95%CI for Exp(B)
Reliability	1,604	0,001	4,973	1,987-12,447
Responsiveness	2,060	0,000	7,843	3,126-19,679
Empathy	2,096	0,000	8,132	3,328-19,868
Constants	-2,696	0,000		

3.1 Reliability

The results showed that there was a relationship with reliability on inpatient satisfaction. Patients who stated good nurse reliability, had a 4.9 times higher chance of being satisfied compared to patients who expressed poor nurse reliability.

This study is in line with the results of research conducted by Simbala, Rattu, & Sondakh (2013) showing the probability value ($p = 0.002 < 0.05$) indicates that there is a significant relationship between the service of nurses' responsiveness and patient satisfaction. The results of research conducted by Mubin & Jalal (2017), found that the assessment of the quality of nursing services: high reliability category is 45 respondents (45%), moderate category is 52 respondents (52%), and low category is 3 respondents (3%). The quality of nursing services on the reliability dimension is significantly related to inpatient satisfaction. From those results of the regression analysis can be concluded that the reliability variable has a positive and significant relationship to patient satisfaction.

In hospital services, nurses are very much in the spotlight, because it is closely related to patient and family satisfaction. Even the presence and touch of nurse services have the largest proportion of services in hospitals, so without ignoring the services of other officers, the nurse service with its reliability in providing nursing care is certainly a service that should get more attention for management at the hospital. Reliability That is the ability to provide the promised service immediately, accurately and satisfactorily, honestly, safely, on time, availability.

According to the researchers' assumptions, the results of this study prove that nurse reliability is related to inpatient satisfaction. This shows that if nurses demonstrate reliability in providing nursing care to patients, the satisfaction felt by inpatients also increases. According to the researchers' assumptions, the reliability of nurses perceived by inpatients while being treated is that nurses are always responsive when asked by patients for help, keep the room clean and quiet, pay attention to cleanliness and maintain

the peace of the room, the bed linen is replaced immediately if it looks dirty or wet, conducts an examination of conditions patients from morning to night even though carried out alternately by nurses, routinely control the infusion that is placed on the patient, do physical examinations especially vital signs in accordance with the specified time.

Patients also stated that nurses' reliability was still not good because nurses paid less attention to the patient's body hygiene during treatment. Usually the patient's family wipes the patient's body because the patient is not allowed to take a shower. Others that patients felt less well were the nurse also does not help the patient on taking the medication but assisted by the family. Nurses got medical checks in late, since the nurses work baed on the shifts and also the nurses' behavior varies from one to another, especially in providing services to inpatients.

3.2 Responsiveness

Based on the study results indicate that there was a relationship between responsiveness to the inpatient satisfaction. Patients who stated that nurses' responsiveness were good, had a 7.8 percent higher chance of being satisfied than stated not good. The responsiveness variable is associated with inpatient satisfaction. Demands for services that address various complaints from the forms of service provided become a positive assessment of the responsiveness of the providers and receiver of the services. The party providing the service should find that the person being served lacks understanding of the various procedures or mechanism requirements, it is necessary to provide a clear and wise understanding, also provide various alternative facilities to follow the correct service conditions. Therefore, the impression of the customers or responds to the customer desires of being served.

Responsiveness is the desire of an employees to help consumers and provide services that are responsive to the needs of a consumers, quickly pay attention and address the needs. According to the used assumptions, the results of this study indicate that nurses' responsiveness in providing nursing care was related to inpatient satisfaction. Also, the more responsive of the nurses to the inpatients complaints and needs, the more satisfied the inpatients feel. Inpatient satisfaction with nurses' responsiveness because nurses immediately come when called (less than 5 minutes), nurses help eat/drink patients if unable to do it themselves, nurses provide moral support (enthusiasm) for healing inpatients, discuss patient problems with the family in performing

nursing actions, the nurse also explained about further care at home. Those makes the patient feel satisfied and feel comfortable during treatment.

The study also found that some patients felt that nurses' responsiveness was still lacking, such as the nurse does not immediately check the patient's condition after treatments. Patients expect that after a treatment from a nurse or a doctor, the patient wish the nurse to always check the patient's condition but there are some patients who do not get such attention. There are also patients who say that nurses do not provide moral support / enthusiasm for patient recovery. This causes the patient to feel less satisfied with the nurse's responsiveness service.

3.3 Empathy

It was found that the empathy variable has a relationship with inpatient satisfaction. Patients who expressed good nurse empathy were more likely to be satisfied by 8.1 times higher than patients who stated nurse empathy was not good. Empathy or concern includes ease in making good communication relationships and understanding consumer needs that are manifested in attention to each consumer, serving friendly and attractive, understanding consumer aspirations, communicating well and correctly and behaving sympathetically.

It has been proven that empathy is related to the satisfaction felt by inpatients. According to the Assumption, nurses' empathy is obtained by showing concern and sympathy for what the patient feels, communicating about the patient's condition, explaining hospital regulations, and taking care of nursing in a friendly and polite manner. Empathy is the variable most related to inpatient satisfaction. This means that empathy has a positive and significant relationship to patient satisfaction. The better the patient's perception of nurse empathy, the patient satisfaction will be higher, and if the patient's evaluation of nurse empathy is not good, the patient satisfaction will be lower.

The things that make some patients feel that the empathy of nurses less than good was some patients assume that nurses do not provide satisfactory answers to the questions asked. Also the nurses did not provide opportunities for patients to express the patients' feelings or complaints. In addition, some patients feel that nurses were not easily contacted if needed.

4 CONCLUSIONS

From the results of a study of a number of respondents, it was found that patients who felt less satisfied were 25.3%, while those who were satisfied were 74.7%. Patients' good perceptions about reliability, responsiveness and empathy ranged from 72.1% -76.3%, while unfavorable between 23.7% - 27.9%. The reliability, responsiveness, and empathy of nurses are related to inpatient satisfaction. The most dominant variable related to inpatient satisfaction is empathy. Patients who state that nurses empathize have a chance of being satisfied 8.1 times higher than patients who lack empathy.

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