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QUALITY AND PROCEDURAL STANDARDS OF PHARMACEUTICAL CARE DELIVERY IN PUBLIC AND PRIVATE HOSPITALS: DETERMINANTS OF SERVICE EXPERIENCE AMONG BPJS HEALTH BENEFICIARIES IN MEDAN

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ABSTRACT

Background. Indonesia has introduced the National Health Insurance program (BPJS) across both public and private hospitals. However, its implementation has been inconsistent, resulting in varying levels of service quality among hospitals. Notably, there is an absence of a unified national standard procedure, particularly within the pharmaceutical departments.

Methods. This research used cross-sectional descriptive with survey mixed methods with aspects of quality of service depends variables independent divided into reliability, assurance, empathy, responsive, and tangibles affected relatively dependent variable as patient satisfaction with total of 384 respondents from public hospital and private hospital using multiple linear regression analysis and coefficient of determination (R^2) to see strongest variables that most influenced via SPSS 24 software.

Results. This study employed a cross-sectional descriptive design utilizing a mixed-methods survey approach. The independent variables, representing dimensions of service quality namely reliability, assurance, empathy, responsiveness, and tangibles were analyzed for their impact on the dependent variable, patient satisfaction. A total of 384 respondents from both public and private hospitals participated. Data analysis was conducted using multiple linear regression and the coefficient of determination (R^2) to identify the most significant predictors influencing patient satisfaction.

Conclusions. Patients demonstrated a preference for private hospitals due to their superior quality of healthcare services across all evaluated dimensions in this study. Private hospitals have effectively delivered high-standard pharmaceutical care, resulting in greater patient satisfaction. Consequently, it is advisable for the government to establish comprehensive national operational standards to regulate BPJS patient services uniformly.

Keywords : Healthcare Service Quality, Pharmaceutical, Public Hospitals, Private Hospitals, Indonesia National Health Insurance (BPJS)

Introduction

Patient satisfaction became an important factor for quality health service (1). There are many phases done to get the good quality of health service, giving patients the right things to get the investment in health will provide the patient satisfaction. If the patient participates or gets involved in assessing care, then the hospital can maintain the quality of services to obtain the satisfaction (2). One important part of the hospital is the pharmaceutical department, because after getting the health treatment then the outpatient will go to the pharmaceutical department to redeem the drugs as health support (3). The pharmaceutical department has an important role for shaping patient loyalty and raises patient satisfaction delivery process and drug availability also the usefulness information of the drug must be disclosed by the patient transparently (4). The pharmaceutical department is the patient's top point in determining their satisfaction. This is in accordance with the order in which the patient registers, continues with receiving a medical examination, and ends with taking the medication, and this is a very crucial sector for every hospital (5).

In Indonesia, the Ministry of Health implementing national insurance for all Indonesian citizens called BPJS (Badan Penyelenggara Jaminan Sosial) (6). BPJS has been implemented since 2014 as a form of improvement and development of hospital services. All hospitals in Indonesia must have the same standard of quality service, patients pay the same fees and use the same program of BPJS subsidized by the government (6). The quality of health care service and patient satisfaction are different to each hospital especially between public hospital and private hospital (7).

Not all public and private hospitals have a collaboration with the government to implement the BPJS insurance program (8). Medan is an area that has public and private hospitals with the same accreditation from the government as the BPJS insurance program. This is the main basis for conducting this research in Medan, Indonesia. This research hypothesis intended to explore the difference of quality health services of pharmaceutical department between public hospital and private hospital towards patient satisfaction using national health insurance (BPJS) in Medan, Indonesia by analyzing the influence between quality health service and patient satisfaction.

Methods

A total of ten hospitals with good accreditation, divided into five public and five private hospitals in the Medan area which implement the BPJS health insurance program were the locations for this research. Respondents are outpatients with the BPJS insurance program and have received services at the pharmaceutical department independently and are not part of the hospital, Patients must be over 18 years old and have been registered as a member of the BPJS insurance program since 2018.

This research used the total quota sampling method to get respondents according to the formula of Lemeshow (9)

$$n = \frac{Z_1^2 - _{a/2}\, P(1-P)}{d^2}$$

$$n = \frac{1.96^2 - 0.5(1-0.5)}{0.05^2} = 384 \text{ respondents}$$

384 respondents were divided into 192 respondents from public hospitals and 192 respondents from private hospitals.

This research used Parasuraman's dimensional theory regarding the concept of health services quality with five independent variables (X) and one dependent variable (Y) (10).

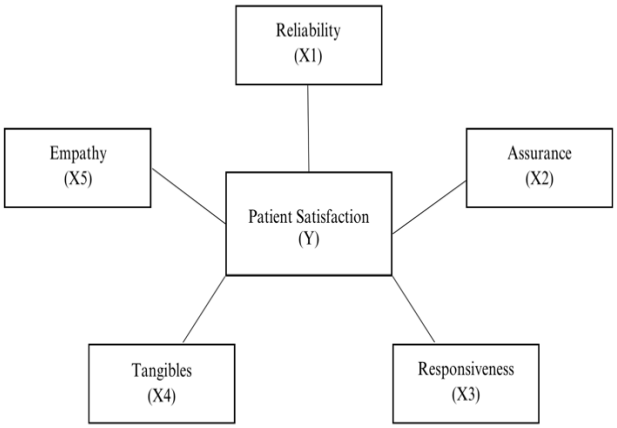

Fig 1. Research Variables

These variables are used in public and private hospitals. The questionnaires were distributed to respondents using a five-points Likert scale with a value of 1 (very disappointed) to 5 (very satisfied) (11). This research has constructed 5 dimensions with a total of 26 items.Statistical analysis of this research included validity test, reliability test, normality test, multivariate analysis, multiple linear regression analysis, analysis of variance and coefficient of determination (R2) via SPSS 24. From the validity test, an item is declared valid if the R count value is greater than the r table value (12). In this research, 26 question items from variables had value > 0.119 (r table value). All of Cronbach's Alpha values from 26 items are > 0.60, which means that all items are reliable (13). This research tested the normal distribution of all variables of the respondent's questionnaire in public and private hospitals, if the sig value is > α (0.05) then the distribution is normal (14).

Table 1. Normal Distribution

Hospital	Variables	sig value
Public	Reliability	0.350
	Assurance	0.261
	Empathy	0.359
	Responsiveness	0.153
	Tangibles	0.562
	Patient Satisfaction	0.751
Private	Reliability	0.645
	Assurance	0.528
	Empathy	0.147
	Responsiveness	0.521
	Tangibles	0.365
	Patient Satisfaction	0.189

Source: Primary Data Processed, 2023

Based on the test results from Table 1, all research variables are stated to be normally distributed to public and private hospitals. and proceed to testing the research results via SPSS 24 software.

Result

Respondent Characteristics

384 respondents divided into 192 from public hospitals and 192 from private hospitals tended to have similar characteristics because of National Health Insurance Indonesia (BPJS). The BPJS program is

mandatory for all Indonesian citizens with a monthly payment that must be paid evenly. People always use BPJS when they have health problems (15).

Table 2. Respondent Characteristics Data

Information	**Public Hospital**		**Private Hospital**	
	Frequency	Percent	Frequency	Percent
Gender				
Male	90	46.9	74	38.5
Female	102	53.1	118	61.5
Total	**192**	**100.0**	**192**	**100.0**
Age	59	30.7	63	32.8
Adult (< 45)				
Middle Age (45-59)	92	47.9	81	42.2
Old (60-74)	32	16.7	37	19.3
Elderly (75-90)	9	4.7	11	5.7
Total	**192**	**100.0**	**192**	**100.0**
Education				
No school	4	2.1	10	5.2
Primary school	9	4.7	25	13.0
Junior high school	13	6.8	38	19.8
Senior high school	96	50.0	59	30.7
Diploma	18	9.4	1	0.5
Bachelor	46	24.0	56	29.2
Master Degree	5	2.6	3	1.6
Doctor / PhD degree	1	0.5	0	0.0
Total	**192**	**100.0**	**192**	**100.0**
Occupation	20	10.4	14	7.3
Unemployed				
Housewife	37	19.3	51	26.6
Entrepreneurs	16	8.3	24	12.5
Private Employee	34	17.7	32	16.7
Government Employees	68	35.4	59	30.7
Police	2	1.0	1	0.5
Soldier	1	0.5	1	0.5
Farmers	4	2.1	0	0.0
Student	10	5.2	10	5.2
Total	**192**	**100.0**	**192**	**100.0**

Source: Primary Data Processed, 2023

Correlation Result

From 192 respondents from public hospitals, the Person Correlation value for patient satisfaction is reliability 0.394, assurance 0.737, empathy 0.811, responsiveness 0.479 and tangibles 0.767. The significance values of each variable are $0.0001 < \alpha$ (0.05) and are positive. The type of correlation formed between independent variables (reliability, assurance, empathy, responsiveness, tangibles) and dependent variables (patient satisfaction) is a direct correlation. Correlation formed shows that if the scores from independents variables are good, then the scores for patient satisfaction are good also. However, if the scores from independent variables are bad, the score for the dependent variable are bad (16). Table 4 below provides the correlation in detailed.

Table 3. Correlation Result of Variables in Public and Private Hospitals

		Patient Satisfaction	Reliability	Assurance	Empathy	Responsiveness	Tangibles
Public Hospital	Patient Satisfaction	1.000	0.394	0.737	0.811	0.479	0.767
	Reliability	0.394	1.000	0.433	0.415	0.285	0.375
	Assurance	0.737	0.433	1.000	0.694	0.442	0.532
	Empathy	0.811	0.415	0.694	1.000	0.344	0.678
	Responsiveness	0.479	0.285	0.442	0.344	1.000	0.400
	Tangibles	0.767	0.375	0.532	0.678	0.400	1.000
Private Hospital	Patient Satisfaction	1.000	-0.059	-0.021	-0.012	0.507	-0.017
	Reliability	-0.059	1.000	0.218	0.201	-0.045	-0.037
	Assurance	-0.021	0.218	1.000	-0.009	-0.016	-0.013
	Empathy	-0.012	0.201	-0.009	1.000	-0.009	-0.007
	Responsiveness	0.507	-0.045	-0.016	-0.009	1.000	-0.013
	Tangibles	-0.017	-0.037	-0.013	-0.007	-0.013	1.000

Source: Primary Data Processed, 2023

From 192 respondents from the private hospital, the Person Correlation value for patient satisfaction from reliability (-0.059), assurance (-0.021), empathy (-0.012), responsiveness 0.507 and tangibles (-0.017). The type of correlation that is formed between independent variables (reliability, assurance, empathy, responsiveness, tangibles) and dependent variables (patient satisfaction) is the indirect correlation. This means that if the independent variables scores as the quality of health services are good, it is not necessarily dependent variable as patient satisfaction is good also.

Table 4. Model Summary Result of Public and Private Hospital

				Std. Error of the Estimate	**Change Statistics**					
	R	**R Square**	**Adjusted R Square**		**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**	**Durbin-Watson**
Public	0.893[a]	0.797	0.792	0.209	0.797	146.267	5	186	0.0001	1.954
Private	0.508[a]	0.258	0.238	0.139	0.258	12.954	5	186	0.0001	2.151

Source: Primary Data Processed, 2024

According to the Table 4, the value of significance F change is 0.0001 < α (0.05) for public hospitals which showed that there is a correlation between independent variables (reliability, assurance, empathy, responsiveness, tangibles) and dependent variable (patient satisfaction). The value of R is 0.893 which means that the correlation is strong (16). This result described the form of patient satisfaction. The value of significance F change from private hospital is 0.0001 < α (0.05) which shows there is a correlation between independent variables (reliability, assurance, empathy, responsiveness, tangibles) and dependent variable (patient satisfaction). The value of R is 0.508 which

means that the correlation is medium (16). The value of significance F change from private hospital is 0.0001 < α (0.05) which shows there is a correlation between independent variables (reliability, assurance, empathy, responsiveness, tangibles) and dependent variable (patient satisfaction). The value of R is 0.508 which means that the correlation is medium (16).

Analysis of Variance (ANOVA)

The Significance value from the public hospital showed the significance < 0.001 indicating that all of the independent variables (tangibles, reliability, responsiveness, assurance, empathy) have impacted dependent variable (patient satisfaction). The Significance value from private hospitals showed the value <0.001 indicating that all of independent variables (tangibles, reliability, responsiveness, assurance, empathy) have impacted dependent variable (patient satisfaction).

Table 5. Anova Result of Public and Private Hospital

Model		Sum of Squares	df	Mean Square	F	Sig.
Public	Regression	31.952	5	6.390	146.267	0.0001[b]
	Residual	8.126	186	0.044		
	Total	40.078	191			
Private	Regression	1.258	5	0.252	12.954	0.0001[b]
	Residual	3.612	186	0.019		
	Total	4.870	191			

Source: Primary Data Processed, 2023

Coefficients Test Result

If the value of sig from independent variables (reliability, assurance, empathy, responsiveness, tangibles) is smaller than 0.05, the variable is more influential on patient satisfaction. In the table below, for public hospital tangibles variable has the smallest Sig (p-value) value of 0.0001. For private hospital responsiveness variable has the smallest sig (p-value) value of 0.002 and becomes the most influential effect compared to the other independent variables on patient satisfaction.

Table 6. Coefficients Test Result of Public and Private Hospitals

Variable		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	B	Std. Error
Public	(Constant)	0.063	0.062		1.012	0.031	-0.186	0.060
	Reliability	0.043	0.048	0.033	0.886	0.377	-0.137	0.052
	Assurance	0.264	0.049	0.263	5.370	0.036	0.167	0.361
	Empathy	0.377	0.054	0.371	6.916	0.010	0.269	0.484
	Responsiveness	0.101	0.036	0.106	2.795	0.031	0.030	0.172
	Tangibles	0.341	0.046	0.346	7.437	0.0001	0.251	0.432
Private	(Constant)	0.771	0.417		1.848	0.026	-0.052	1.593
	Reliability	0.026	0.033	0.035	0.365	0.583	-0.083	0.048
	Assurance	0.085	0.032	0.505	0.024	0.023	-0.171	0.158
	Empathy	0.318	0.143	0.279	0.032	0.036	-0.282	0.281
	Responsiveness	0.484	0.012	0.505	4.217	0.002	0.488	0.809
	Tangibles	0.182	0.099	0.116	0.380	0.044	-0.214	0.177

Source: Primary Data Processed, 2023

Multiple Linear Regression Analysis

The following are the final results for the influence of independent variables (reliability, assurance, empathy, responsiveness, tangibles) on the dependent variable (patient satisfaction) for the quality of health services in pharmaceutical departments of public and private hospitals in Medan, Indonesia. For public hospital, Y = 0.063 + 0.264*assurance + 0.377*empathy + 0.101*responsiveness + 0.341*tangibles + 0.062 and for private hospital Y = 0.771 + 0.85*assurance + 0.318*Empathy + 0.484*responsiveness + 0.182*tangibles + 0.417. only reliability variable as insignificant variables towards patient satisfaction in public and private hospitals.

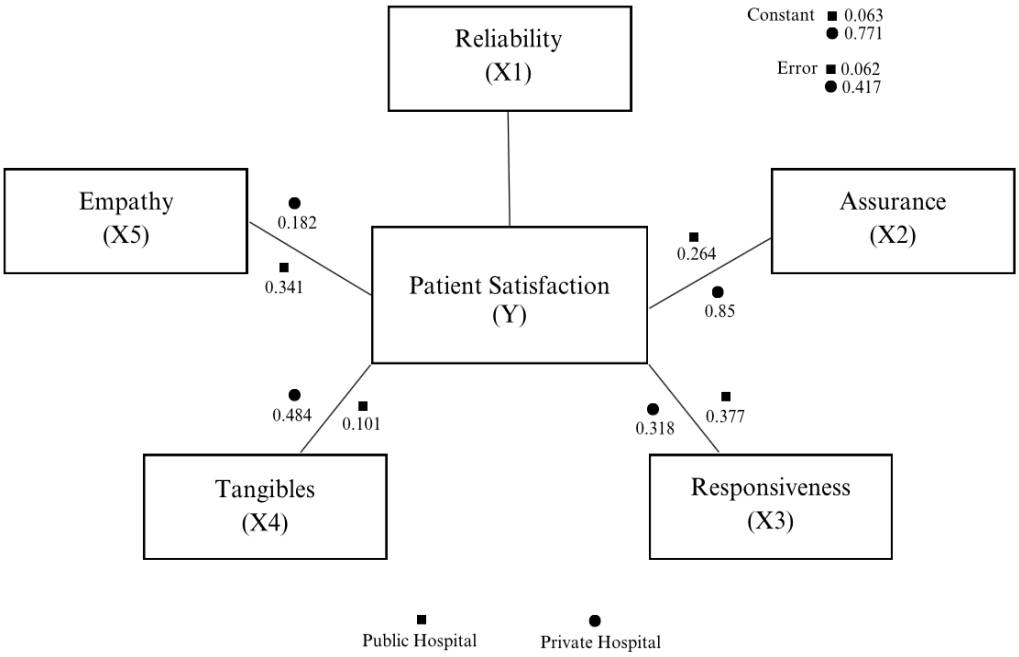

Fig 2. Multiple Linear Regression Analysis

Discussion

Quality Health Services of Pharmaceutical Department Between Public Hospital

Public hospital did not provide the easiness and regular services. Patients had considered that the service procedures of the pharmaceutical sector were complicated to understand. Pharmaceutical officers did not have sufficient experience while serving patients, and often asked to other officers about the drugs to be used whether they are correct or not. Pharmacist only invited patients to take the queue number with the administrative machine without gave any help and how to be used and only guessed how to use the queue number machine. Pharmacists did not mention the price of drugs to patients, and only provided drugs as directly to patients if the drugs are available also did not specify to give the function of drugs in detailed. Patients argued that pharmacists did not maintain the pharmaceutical support equipment as correctly and many equipment was not thoroughly modern and improved. The administration system was not covered the valid identity of the recipient that makes anyone possible to take the drug, pharmacist also often called the name of the patient strongly when the patient comes too long to the pharmacist table, the other patient could hear the name of the person that just called and asked about what kind of drugs that will be taken.

Patients believes that the drugs given by pharmacists in public hospital were not affecting for healing diseases in the body, patients often asked the pharmacist about the accuracy of the drugs. Patients thought that pharmacist staffs were working in the pharmaceutical sector very lacking, especially at rush hour. Pharmacists had only provided information to patients when they were receiving the drug. When it was finished, and the patient wants to do a re-consultation, patients have to wait from the

start following the queue. Patients were often asked about the composition and function of the drugs, but the pharmacists were explaining hastily and seemed to want to end the conversation with patients. Pharmacists did not say specific time for availability of the drugs. When patients need to request and complaining about their problem, the number of pharmacist and staff are very less and made the patients difficult for complaining. Patients felt that the queue was confusing because it has a very long duration to queue without explanation. Pharmaceutical location located in the middle of the hospital, it makes patients get lost and going to other areas. Lack of location information makes it difficult for patients to find pharmaceutical buildings. Patients considered that the waiting room for patients at the public was not uncomfortable and hot. The chairs that should be used by patients to sit were damaged and make patients did not want to sit. The drugs received by patients from pharmacists were not well for wrapping and only given with handwritten labels. The drug was put into plastic and taken directly by the recipient. The drug package also looks not fresh and dull as it was stored for a long time. The condition of the drug received was not entirely right, and sometimes patients found a tablet drug that had ruptured in its package.

Quality Health Services of Pharmaceutical Department Between Private Hospital

The flow and procedures of pharmaceutical services in private hospital are effortless to understand. There is a customer service that is ready to serve if the patient needs to ask the information. Services that are easy to understand in healthcare services can increase patient satisfaction in evaluating the quality of health services (17). Pharmacists are also very enthusiastic in welcoming and helping patients. Patients also assess that the call center number always can be found if the pharmacists did not follow the applicable rules and had high knowledge and experienced. Pharmacist had served patients very well in the queued system orderly, an orderly, organized and controlled administrative process made the patient feel comfortable getting health services (18). Patients said the pharmacists were explaining in details for the information about the drugs, and effects to the patient's body after consumed the drugs. Patients also felt safe about the accuracy of the drugs given by pharmacist. Pharmacists also conform to patients who took drugs regularly about the progress obtained for healing the disease. The clarity of drug information given by pharmacist to the patient will give rise to patient trust and increasing patient satisfaction (19).

Patients felt that pharmacy staffs were working in the pharmaceutical sector with sufficient to serving patients per day, but it still needs to improve during rush hour that pharmacists could be provided the maximal services. Several pharmacists were always on standby if the patients want to ask or do the re-consultation after they got the medicine. The consultation was smoothly and freely without makes the patients queue with long lines. The patients considered that the pharmacists were very friendly to the patient to building excellent essential communication. Communication between pharmacist and patient is the basis of service. Patients have the perception to get the medicine according to what their needs, pharmacist have to communicates well to the patient (20).

Patients considered that the drug condition received from the pharmacist at private hospital looks fresh and new. The drugs have wrapped with quality plastic accompanied by information on drugs attached to the plastic. This information includes the patient's medication schedule, expiration date, composition, and the name of the drug with the hospital's logo. Patients carried drugs using high quality white plastic accompanied by customer service information and emergency telephone numbers. The tablet's drug condition was also not damaged and looks new without any damage. Public hospitals must follow the example of private hospitals to improve the quality of patient satisfaction (21). In improving the comprehensive quality of health services in each region and area, national scale standardization is needed as a reference for management to prevent imbalances in the quality of health services. (22) (23).

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