

Analysis of Service Quality and Patient Satisfaction using SERVQUAL Method in Particular Public Hospital

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Abstract: The purpose of this research is to measure the quality of services and patient satisfaction in the particular public hospital and to find out which service dimension is the main priority for improvement. This research measures the gap between patient expectation and patient perspective based on questionnaires completed by 202 patients from various polyclinics. This research used SERVQUAL method based on five dimensions of service quality such as tangible, reliability, responsiveness, assurance, and empathy. The result of this research found that the gap value from all dimensions are negative, and the main priority dimension for improvement are empathy and responsiveness dimension. The conclusion is the service quality in the hospital has not been satisfactory yet and the hospital should improve the quality of service in all dimensions especially on empathy and responsiveness dimensions.

1 INTRODUCTION

Service quality means the fulfillment of patient expectations, the ability of service providers to fulfill the needs and expectations of patients will generate a positive performance of the ability of service providers. If the performance of service quality is positive and provider's performance met the patients' expectations, the patients will be more confident in the ability and competence of the provider or hospital (Zarei et al., 2015). According to (Long,), healing and recovery are no longer the only measurements of patient satisfaction. (Akhade et al., 2016) conducted research in hospitals in several countries. Problems of service quality found in general were about the effectiveness of care, availability of resources, financial accessibility, modernization of equipment, timeliness of care delivery, performance accuracy, improvement of interpersonal relationships, communication skills of doctors, nurses, and other hospital personnel.

Hospitals in Indonesia are ranked at 774 in Asia rankings and ranked 3858 in the world rankings. Hospitals in Indonesia are still unable to compete with the hospitals in Singapore that ranked at 45 and Malaysia ranked at 171 in Asia (Punnakitikashem et al., 2012). Hospitals in Indonesia are left behind compared to ASEAN countries. Indonesian people choose to have medical treatment in other countries. It means that the quality of hospitals in Indonesia should be improved,

this is also a proof that the hospitals' quality of service in Indonesia is still low and there are still many hospitals that have poor service.

Based on observation in Particular public hospital, the main problem in the hospitals' service quality that has been complained by the patients. According to the Law of the Republic of Indonesia number 44 year 2009 about hospitals, hospitals' permits can be revoked if the hospitals no longer meet the requirements and standards, therefore this study aims to measure the services quality provided by the hospitals, and researchers try to determine the service quality and the level of patient satisfaction in Particular public hospital based on data and find the right solution to solve the problem. This research also find that the hospitals provide registration service via SMS Gateway, where allow the patients to register without need to come to the hospital and queue up, but patients are still complaining because the SMS Gateway service registration is limited per day. The purpose of this research is to measure the services quality that is given to the patients and to explore the patients satisfaction in the Particular public hospital. This research will find which service dimension of servqual is the top priority for an improvement in the Particular public hospital.

2 LITERATURE REVIEW

Based on (Parasuraman et al., 1980) cited in (Rezaei et al., 2016), the main way to improve the service quality in health sector is to monitor and evaluate the services provided by companies using tools and models for quality measurement. One of the best and most used models to evaluate the service quality in health care is the SERVQUAL model. SERVQUAL method aims to understand how customers perceive service quality. Instruments or questionnaires are used to compare what service companies should offer, their expectations, and their performances of actual service performance (Punnakitikashem et al., 2012).

The level of expectation and performance of service quality is measured by five dimensions based on (Manulik et al., 2016):

1. Tangibility (appearance of physical facilities, equipments, and personnel)
2. Reliability (ability to perform promised services accurately and appropriately)
3. Responsiveness (willingness to provide fast service and ability to help customers)
4. Assurance (knowledge and propriety of employees, ability to build confidence and trust)
5. Empathy (concern, individual attention given to the company's customers)

the research that taken from books, journals, previous research and others. Primary data collecting was obtained through questionnaires distribution and by short interview given to 202 patients in Particular particular public hospital from 23 polyclinics distributed randomly from 23 polyclinics in the hospital, this is limited due to a non-visited polyclinic for the sake of joint health. Data processing in this research began by testing validity and reliability.

The questionnaire is based on 22 questions, it has three parts of statements where the first one is measuring the importance of service quality, the second is measuring patient expectations, and the third is measuring patient performances of the actual service delivered. The 22 questions are divided into 5 dimensions. Each dimension measures the service on a scale of 1 to 5.

1. Tangibility 4 attributes (appearance of physical facilities, equipments, personnel)
2. Reliability 5 attributes (ability to perform promised services accurately and appropriately)
3. Responsiveness 4 attributes (willingness to provide fast service and ability to help customers)
4. Assurance 4 attributes (employee knowledge and decency, their ability to build trust)
5. Empathy 5 attributes (concern, individual attention given to the company's customers)

3 RESEARCH METHODOLOGY

The method used in this research is quantitative methods. Quantitative research is done by collecting numerical data, observing and measuring phenomena that can be analyzed statistically, repeated and replicated by the same researchers or other researchers under similar conditions (Hancock., 2002; Hamilton., 2003) cited in (Everest, 2014).

The type of data used in this research is the primary data. Primary data refers to information obtained directly by researchers on interest variables for specific research purposes (Sekaran and Bougie., 2013: p113). This research was conducted using convenience sampling technique. Convenience is collecting information from a group of people who are willing to give it (Sekaran and Bougie, 2016). There are 202 inpatients and outpatients from several polyclinics in the hospital.

3.1 Data Collection

This study was conducted for a month by collecting the information based on literature review related to

The following formula is used to calculate servqual gap:

$$SQ = \text{comparison of expectation}(E) \text{ with performance level}(P) \\ SQ = P - E \quad (1)$$

Dimension	Variable
Tangibility	Physical elements such as office furniture layout, communication materials, and physical appearance such as uniforms and equipments.
	P1-Equipments
	P2-Physical environment
	P3-Physical appearance of contributors P4-Materials related to the provision of services
Reliability	Ability to perform established services in safe and reliable way.
	P5-Keep the promise
	P6-Interest in solving customer problems
	P7-Interest in doing the right service for the first time
	P8-Commitment to fulfill the service P9-Persistence in performing the service properly
Readiness (Responsiveness)	Willingness to help customers and provides fast service
	P10-Commitment to comply with set deadlines
	P11-Readiness for customer service
	P12-Willingness to solve problems P13-Availability to solve customer questions for clarification
Safety (Assurance)	The ability of contributors to provide correct information, decisions and knowledge, and trust.
	P14-Employees give customers confidence
	P15-Customers feel safe while interacting with the Institution
	P16-Courtesy and employee education P17-Have a knowledge that causes customer safety

Figure 1: Operational Variables.

4 RESULTS AND DISCUSSION

Based on the data processing, found the result of respondents by gender, as follows:

Gender	Amount	Percentage
Men	59	26%
Women	143	76%
Total	202	100%

Figure 2: Respondents by gender.

Based on the data processing, found the results of respondents by age, as follows:

Age	Amount	Percentage
<20 years	19	10%
21 – 30 years	66	33%
31 – 40 years	57	28%
41 – 50 years	27	13%
>50 years	33	16%
Total	202	100%

Figure 3: Respondents by age.

Based on the data processing, found the results of respondents by last education, as follows:

Education	Amount	Percentage
Elementary school	25	12%
Junior High School	29	14%
Senior High School	94	47%
Diploma/Bachelor	51	25%
Others	3	2%
Total	202	100%

Figure 4: Respondents by last education.

Based on the data processing, found the results of respondents by income, as follows:

Income	Amount	Percentage
<3 million	113	56%
3-4 million	49	24%
4-5 million	28	14%
5-6 million	6	3%
>6 million	6	3%
Total	202	100%

Figure 5: Respondents by income.

Based on the data processing, found the results of respondents by polyclinic, as follows:

Polyclinic	Respondents
Inpatient Room	20
Child Inpatient Room	10
Dental	9
Pediatric	10
Ophthalmologist	8
Dermatologist	8
Medical rehabilitation	7
ENT Specialist	9
OBGYN	10
Orthopedic	15
Psychiatrist	11
Surgeon	20
Pulmonologist	12
Cardiologist	10
Neurologist	9
Internist	9
Anaesthetic	2
Medical Check Up	6
Diabetic Center	2
Clinical Nutritionist	5
Emergency	2
Laboratory	6
Urologist	2

Figure 6: Respondents by polyclinic.

Questionnaires were distributed to 23 polyclinics in the hospital. The number of respondents obtained is 202, which from 202 respondents have different profiles. The result of respondent profile data shows that most patients of Particular public hospital are female with productive age that is 21 to 30 years old with high school diploma or equal to working as a housewife with income below 3 million.

Figure 7 are obtained from calculating the value of servqual gap from patient Performance minus patient Expectation.

Dimension	No	Attributes	Performance	Expectation	Gap
Tangible	1	The hospital has complete medical equipment	3,68	4,69	-0,87
	2	The hospital has good facilities	3,89	4,67	-0,78
	3	Hospital employees are well dressed	4,11	4,58	-0,47
	4	The hospital has a complete brochure or information leaflet.	3,78	4,51	-0,73
Average			274	281	-0,71
Reliability	5	The hospital provides a services as promised	3,66	4,66	-0,81
	6	The hospital helps to solve patient problems	4	4,66	-0,66
	7	The hospital provides the first aid precisely	3,99	4,72	-0,73
	8	The hospital is committed to fulfill the promised service	3,93	4,67	-0,74
Average			3,97	4,70	-0,73
Responsiveness	10	Hospital employees provide services on time	3,62	4,69	-1,07
	11	Hospital employees are always ready to serve patients.	3,95	4,72	-0,78
	12	Hospital employees are always ready to help Patients.	4,02	4,67	-0,65
	13	Hospital employees always answer the patients' questions clearly.	4,03	4,63	-0,60
Average			3,90	4,68	-0,78
Assurance	14	Hospital employees can make patients believe.	3,99	4,65	-0,66
	15	Hospital employees can make patients secure.	3,98	4,68	-0,70
	16	The hospital has friendly employees.	3,84	4,69	-0,85
	17	Hospital employees have medical knowledge to answer patient questions.	4,02	4,61	-0,59
Average			3,96	4,66	-0,70
Empathy	18	The hospital cares about patients	3,88	4,66	-0,68
	19	The hospital has an organized schedule	3,66	4,72	-1,06
	20	Hospital employee is care about patients.	3,99	4,71	-0,72
	21	The hospital already provides the best service to patients	3,95	4,77	-0,82
Average			3,89	4,66	-0,78
Average			3,89	4,70	-0,81

Figure 7: Average servqual gap value.

The biggest gap found in P10 with the value of -1.07 i.e. hospital employees have not been able to provide services on time and P19 with a value of -1.06 i.e. the hospital does not have an organized schedule because based on open questions, most of the patients are complaining about the queue and the service time-liness.

Overall the quality service from Particular public hospital has not fulfill patients' expectation because patients' expectation is higher than patient' performance.

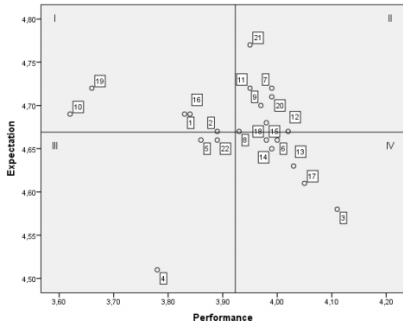


Figure 8: Cartesian diagram

There are 4 quadrants in Cartesian diagram. Quadrant I is the priority area that must be improved because it has a very important value, but the service has not met patient's expectations. The attributes included in quadrant II are P1 (the hospital has complete medical equipment), P2 (the hospital has good facilities), P10 (hospital employees provide services on time), P16 (the hospital has friendly employees), P19 (the hospital has an organized schedule).

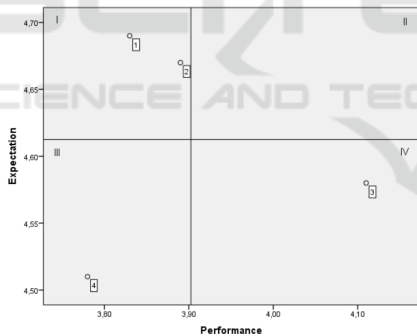


Figure 9: Cartesian diagram Tangible dimension

The main priorities for improvement for the hospital are facilities and medical equipment in the hospital, because according to the short interview with the patient, the medical equipments owned by the hospital are less complete and it also has inadequate hospital facilities. The hospital is not able to do some of emergency measures and major surgery.

Inpatient wards in hospitals are also inadequate because hospital's building has reached the maximum capacity.

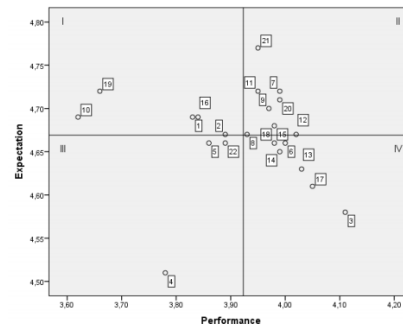


Figure 10: Cartesian diagram

Based on the calculation of servqual gap from the average value of performance and the average value of expectation on Reliability dimension, There is no attributes included in quadrant I because according to the patients' performance, the attribute of Reliability dimension is good enough.

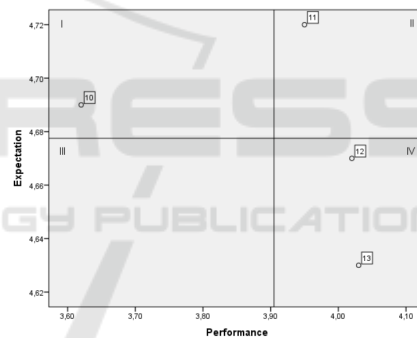


Figure 11: Cartesian diagram Responsiveness dimension

Based on the calculation of servqual gap from the average value of performance and the average value of expectation on Responsiveness dimension, attributes included in quadrant I is P10 (Hospital employees provide services on time).

The attributes included in quadrant II is P11 (Hospital employees are always ready to serve patients).

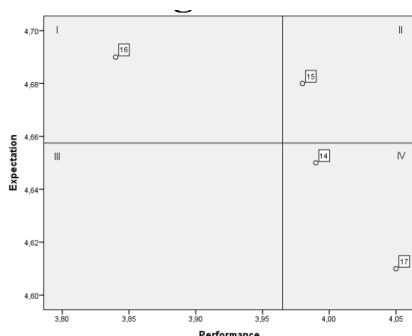


Figure 12: Cartesian diagram Assurance dimension

Based on the calculation of servqual gap from the average value of performance and the average value of expectation on Assurance dimension, the attribute included in quadrant I is P16 (the hospital has friendly employees). The attributes included in quadrant II is P15 (the hospital employee makes the patient feel secure). In the Assurance dimension, the main priority for improvement for the hospital is the hospitality from hospital employees, because some patients feel the nurse did not give appropriate hospitality. Based on a short interview, sick patients want to get good service from the nurses and doctors. But hospital's employees can make patients feel safe while in the hospital because patients believe that they have been treated by professionals.

5 CONCLUSIONS AND RECOMMENDATION

The purpose of this research is to measure the services quality that's given to the patient and to explore the patient satisfaction in the Particular public hospital. This research find which service dimension of servqual is the top priority for an improvement in the Particular public hospital, where the Servqual method is used to know the gap value between patients performance and patients expectation.

The result of this research from calculating the gap in 22 attributes using Servqual method is negative. The largest gap value was found in P10 with a value of -1.07 i.e. hospital employees have not been able to provide services on time and P19 with a value of -1.06 i.e. hospital does not have an organized schedule. The smallest gap value is found in P3 with values of -0.47 i.e. Hospital employees are well dressed and P17 with a value of -0.56 i.e. all hospital employees have a medical knowledge to answer patients'

questions. And also the service attributes, which according to the patients, has the most important value, so that the hospital should think and improve the service are, P21 with values of 4.91 and P22 with values of 4.92, where P21 is about the hospital already provides the best service to patients and P22 is about the hospital employees understand the needs of the patient because the patients expect the hospital to provide services in accordance with the required by the patient and patients expect to get good service and feel satisfy. In the level of service quality provided by the hospital is found that the attributes of the five dimensions have a negative gap value.

6 IMPLICATIONS

Based on the analysis results of this study, patients expect the hospital can improve the service quality by improving the timeliness of service. Manage the doctors' schedule by arranging the operation schedule. When operation and visit schedule are managed, patient will not wait too long for a visit. Manage the queues in registration by increasing the registration counters. Minimize the number of queues by adding the registration quota via SMS Gateway or the hospital can also create a special website to register, to get the queue number and will also be determined at what time the patient will be checked, so that patients do not have to queue for too long and it will reduce the number of queues in the hospital, and improve the pharmacy queues by adding more of pharmacy staff. The hospital is also expected to give individual care and attention to the patient, hopefully patients would feel more comfortable in the hospital.

7 LIMITATION

This research is limited to the service quality in particular public hospital with 202 respondents. Suggestion for future research is to analyze and compare service quality in more than one hospital, especially in private hospitals. Find more respondents with various backgrounds. Most respondents in this study chose the hospital because this hospital because it is free of charge and they get recommendation letter from their nearest health care.

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