

Identification of customer satisfaction factors through the service quality dimensions: A case study of ABC Hospital, Surabaya



Rachma Rizqina Mardhotillah^{1*}, Denis Fidita Karya¹, Reizano Amri Rasyid¹, Berto Mulia Wibawa^{2,3}

ABSTRACT

Introduction: The value of customer satisfaction is a significant deal for a hospital. Because it reflects the quality of the hospital, an assessment was obtained not only for outpatient customers but also for inpatient customers. In addition, global competition to provide the best service also became a consideration. Therefore, this study aims to see the suitability between the customer expectations and customer reality of ABC Hospital, Surabaya, in this case, especially the inpatient customers of ABC Hospital, Surabaya, and the level of inpatient customer satisfaction at ABC Hospital, Surabaya.

Methods: This was a cross-sectional study. The sampling technique that was carried out was the total sampling technique. This study exploited secondary data as a benchmark for customer satisfaction assessment. The secondary data was used to identify problems at ABC Hospital, Surabaya. The researcher explored primary data for three weeks. The primary data collection method was carried out by distributing questionnaire forms to ABC Hospital, Surabaya's inpatient customers for three weeks with 131 respondents. This research uses the customer satisfaction index to measure the percentage of customer satisfaction levels and uses importance-performance analysis to show which indicators affect customer satisfaction.

Results: Our findings conclude that the value of inpatient customer satisfaction at ABC Hospital was 73.2%. The Importance-performance analysis method results indicate that there are 12 attributes of services or facilities whose performance meets the customers' expectations. But, there are three attributes far from the customer's expectations, namely parking space, the accuracy of the doctor's visit time, and service waiting time. They have to be improved by hospital management.

Conclusion: The inpatient satisfaction in ABC Hospital, Surabaya, was under the government standard.

Keywords: Customer Satisfaction, Customer Satisfaction Index (CSI), Importance Performance Analysis (IPA), Service Quality.

Cite This Article: Mardhotillah, R.R., Karya, D.F., Rasyid, R.A., Wibawa, B.M. 2023. Identification of customer satisfaction factors through the service quality dimensions: A case study of ABC Hospital, Surabaya. *Bali Medical Journal* 12(3): 2850-2854. DOI: 10.15562/bmj.v12i3.4443

¹Department of Management, Universitas Nahdlatul Ulama Surabaya, Indonesia;

²Department of Business Management, Institut Teknologi Sepuluh Nopember, Indonesia;

³School of Business, Monash University, Bandar Sunway, Malaysia.

*Corresponding author:
Rachma Rizqina Mardhotillah;
Department of Management, Universitas Nahdlatul Ulama Surabaya, Indonesia;
rachma.rizqina@unusa.ac.id

Received: 2023-04-27

Accepted: 2023-08-26

Published: 2023-09-23

INTRODUCTION

The value of customer satisfaction is a significant deal for a hospital. Because it reflects the quality of the hospital. An assessment was obtained not only for outpatient customers but also for inpatient customers.¹ The hospital must conduct periodic inspections to see how patients respond to services. Thus, accreditation must be carried out periodically, at least every three years, to improve the quality of hospital services. This accreditation is carried out by an independent institution based on applicable accreditation standards.² A global competition to provide the best service also became a consideration.³

ABC Surabaya Hospital an already assessed customer satisfaction.

Evaluations were carried out through questionnaires given directly to patients or users of ABC Hospital service facilities. The values obtained were still not satisfactory for Hospital ABC, which is below 80%, whereas the target satisfaction requirement made by ABC Hospital was 90%.⁴ Another study that assessed the outpatients at Private Medical College Hospital in Mangalore reported that about 97% of the respondents were satisfied with the explanation of the disease by the doctor. The average time required for consulting the doctor was 46.5 ± 20.9 min. But when time spent in pharmacy was considered, it was not significantly satisfactory. The investigation cost was extremely moderate or ignoring 97% of the respondents.¹ The current study was conducted in three public sector hospitals,

King Abdullah Hospital Mansehra, Ayyub Teaching Hospital Abbottabad, and Khyber Teaching Hospital Peshawar, Pakistan, with a positive effect of health care services on patient satisfaction.³

In 2016 the Ministry of Health of the Republic of Indonesia implemented regulations on minimum service standards for patient satisfaction above 90%. If there is a type of health service whose level of satisfaction is still below the average, the services provided must meet minimum standards or better quality. The measures the Ministry of Health sets are still quite far compared to the current value of customer satisfaction.⁴ Several facilities and services at the Surabaya ABC Hospital must be improved. Some customer complaints appear. These complaints can interfere with the percentage level of

patient satisfaction, both now and in the future.

Customer satisfaction is to sustain service providers to the next better development by considering the factors in service quality.⁵ Factors influencing customer satisfaction were classified into patient and health system attributes. The patient attributes include expected health status, demographics, and socioeconomic factors. The health system attributes include health service providers, insurance and cost, physician satisfaction, nurse, and other staff. Two factors that will be affected the health service quality and hospital features.⁶ Therefore, this study aims to see the suitability between the customer expectations and customer reality of Surabaya Hospital ABC, in this case, especially the inpatient customers of ABC Surabaya Hospital, and the level of inpatient customer satisfaction at ABC Surabaya Hospital.

METHODS

This was a cross-sectional study. The sampling technique that was carried out was the total sampling technique. This study exploited secondary data as a benchmark for customer satisfaction assessment. The secondary data was used to identify problems at ABC Surabaya Hospital. The researcher explored primary data for three weeks. The primary data collection method was carried out by distributing questionnaire forms to the inpatient customers of Surabaya ABC Hospital for three weeks with 131 respondents. The inclusion criteria were the respondent willing to join in this research and understand all of the questions item in the questionnaire. Moreover, the exclusion criteria needed to be completed data of the questionnaire.

Determine Attributes

The attributes to be examined were attributes that affect inpatient customer satisfaction at ABC Surabaya Hospital, as follows:

1. Conduct an in-depth literature study of 5 Servqual dimensions.
2. Design and create questionnaires based on the attributes of Servqual, tangible, reliability, responsiveness, assurance, and empathy.

Table 1. Operating Variable

Dimensions	Number	Service Attributes
<i>Tangible</i> (X1)	X1.1	Employee Uniforms
	X1.2	Cleanliness of the Waiting Room and Toilet
	X1.3	Parking area
	X1.4	Waiting Room Facilities
<i>Reliability</i> (X2)	X2.1	Doctors Come On Time
	X2.2	Hospital Costs are relatively affordable.
	X2.3	Easy and Uncomplicated Registration Procedure
	X2.4	Convincing Doctor's Appearance
<i>Responsiveness</i> (X3)	X3.1	Cost Conformity with Benefits
	X3.2	Fast Customer Service
	X3.3	Alertness to Serve Customer Needs
	X3.4	Complaints Are Responded to Quickly and Properly
<i>Assurance</i> (X4)	X4.1	Doctor's Explanation is Easy to Understand and Convince
	X4.2	Relatively Fast Service Waiting Time
	X4.3	The Officer Is Polite and Friendly When Serving Customers
	X4.4	Customers Feel Comfortable When in the Hospital
<i>Empathy</i> (X5)	X5.1	Hospital Does Not Distinguish Social Status
	X5.2	There is a Suggestion Box to Accommodate Customer Complaints
	X5.3	Doctors Can Soothe Patient Anxiety
	X5.4	Officers Have Seriousness in Serving

Table 2. Questionnaire Scale

Perception Measurement Scale		Expectation Measurement Scale	
1	Less	1	Less
2	Sufficient	2	Sufficient
3	Good	3	Good
4	Very Good	4	Very Good

Table 1 contains the variables in the questionnaire that will be distributed to customers at ABC Hospital. The assessment was carried out on the level of perception and expectations to see how much customers expected from the service. Then it compares to the reality or perception of customers when getting these services. This questionnaire uses a scale rating of 4 categories, sufficient, good, and very good, as in the Likert scale table (Table 2).

Data Analysis

This research uses the customer satisfaction index to measure the percentage of customer satisfaction levels and uses importance-performance analysis to show which indicators affect customer satisfaction.

RESULTS

The importance-performance analysis produces output as a visual display,

a cartesian diagram showing the distribution of any attributes. The cartesian graph represents quadrant I, II, III, and IV groups. The service or facility from ABC Hospital is classified using importance-performance analysis. Figure 1 shows a map of the attribute distribution in each quadrant. Some services need accentuation because the benefits have low-performance value based on customers' high expectations. In Table 3, facilities and services must be prioritized. The items of facilities and services that were in group I. On the order of priorities, they were parking lots, the accuracy of the doctor's visit time, and the speed of service waiting time. In addition to Quadrant I, ABC Hospital has to look at Quadrants II, III, and IV.

With the identification of the following services in quadrant II, ABC Hospital was obliged to maintain the standards and procedures of the services provided, such as the cleanliness of the waiting and toilet rooms, politeness and friendliness of the

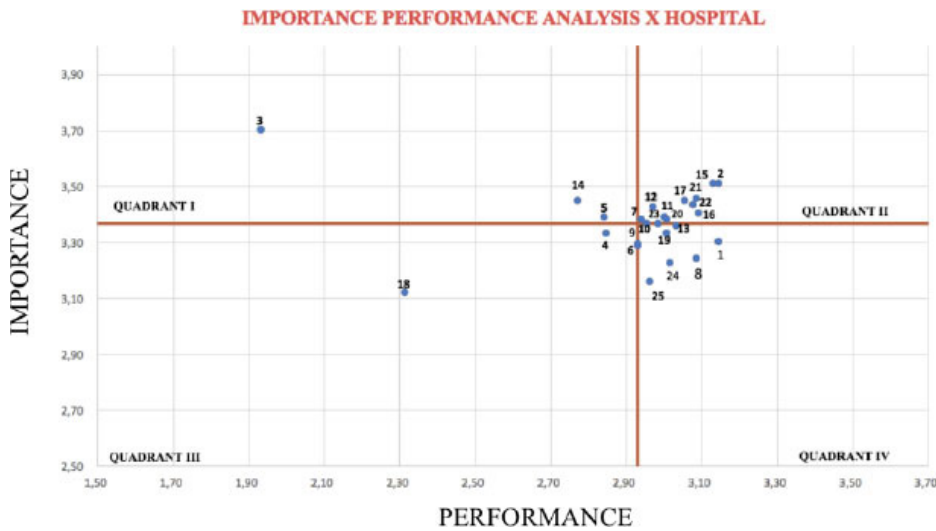


Figure 1. Attributes distribution map.

Table 3. Attributes grouping

Quadrant	Attributes' Number	Attributes
Quadrant I	3	Parking area
	5	Timeliness of Visiting Doctors
	14	Speed of Service Waiting Time
	2	Cleanliness of the Waiting Room and Toilet
	15	Courtesy and Hospitality of Officers when Serving Customers
Quadrant II	21	Customer Satisfaction with Doctors
	22	Customer Satisfaction with Hospital Facilities
	16	Customer's Comfort when in the Hospital
	17	Hospital Does Not Distinguish Social Status
	12	Speed and Accuracy in Responding to Complaints
	11	Efficacy of Officers to Meet Customer Needs
	23	Customer Satisfaction with Services
	20	The Seriousness of Officers When Serving Customers
Quadrant III	7	Easy Registration Procedure
	10	Speed and Accuracy of Customer Service
	18	There is a Suggestion Box to Accommodate Customer Complaints
	4	Waiting Room Facilities
	6	Affordable Hospital Costs
Quadrant IV	9	Cost Conformity with Benefits
	1	Employee Uniforms
	8	Convincing Doctor's Appearance
	24	Willingness to Reselect ABC Hospital
	25	The willingness of Customers to Recommend ABC Hospital to Others
	13	Doctor's Explanation is Easy to Understand and Convince
	19	Doctors Can Soothe Customer Anxiety

staff when serving customers, customer satisfaction with doctors, customer satisfaction with hospital facilities, customer convenience while in hospital,

the hospital did not distinguish social status, speed and accuracy in responding to complaints, alertness of officers in meeting customer needs, service satisfaction, the

seriousness of staff in serving customers, easy registration procedures, and speed and accuracy customer service.

ABC Hospital services are included in quadrant III: suggestion boxes to accommodate customer complaints, waiting room facilities, affordability of hospital fees, and suitability of costs with benefits obtained. In addition to companies carefully considering whether to do a deployment, other aspects can be analyzed based on gaps between the level of importance and customer satisfaction with ABC Hospital. For example, customers still consider that the quality of the service suggestion box could be higher because it does not significantly impact customers. Suggestions or criticisms can be expressed directly to customer care. The low assessment of the suggestion box's performance could be the better perspective of customers because many customers do not see the suggestion box at Hospital ABC.

Quadrant IV contains service items by ABC Hospital that are considered satisfactory, but these services have a small effect on customers. However, it would be all right if ABC Hospital continued maintaining standards and other improvising service items found in quadrant IV. What distinguishes attributes in quadrant IV and characteristics in other quadrants is that the level of satisfaction is higher than the level of service attributes in quadrant III. Still, when viewed in terms of importance, the customer evaluates the attribute items in the quadrant IV group as lower than in the quadrant I and II groups. For further improvisation, it will be good to do it. The ABC Hospital service attribute items in Quadrants I and II would be better.

Customer satisfaction index (CSI)

Analysis to determine the level of customer satisfaction in ABC Surabaya Hospital used the method of customer satisfaction index with the initial stage of deciding the MIS value (Mean Important Score) and MSS (Mean Satisfaction Score) for each attribute or service (Table 4). To determine WF or weight factor, it is then processed by searching for WS or weight score for each service by multiplying MIS and MSS for each service Hospital ABC.

Table 4. MIS and MSS Value

Attribute Service Quality	MIS	MSS	WF	WS
1. Employee Uniforms	3,31	3,15	3,92	12,33
2. Cleanliness of the Waiting Room and Toilet	3,51	3,15	4,17	13,10
3. Parking area	3,70	1,93	4,39	8,48
4. Waiting Room Facilities	3,34	2,85	3,96	11,27
5. Doctors Come On Time	3,39	2,84	4,02	11,42
6. Hospital Costs are relatively affordable	3,29	2,93	3,90	11,44
7. Easy and Uncomplicated Registration Procedure	3,38	2,94	4,01	11,79
8. Convincing Doctor's Appearance	3,24	3,08	3,85	11,87
9. Cost Conformity with Benefits	3,30	2,93	3,91	11,47
10. Fast Customer Service	3,37	2,95	3,99	11,80
11. Alertness to Serve Customer Needs	3,39	3,00	4,02	12,06
12. Complaints Are Responded to Quickly and Properly	3,43	2,97	4,07	12,07
13. Doctors Explanation is Easy to Understand and Convince	3,36	3,03	3,98	12,07
14. Relatively Fast Service Waiting Time	3,45	2,77	4,09	11,34
15. The Officer Is Polite and Friendly When Serving Customers	3,51	3,13	4,17	13,04
16. Customers Feel Comfortable When in the Hospital	3,40	3,09	4,04	12,49
17. Hospital Does Not Distinguish Social Status	3,45	3,05	4,09	12,50
18. There is a Suggestion Box to Accommodate Customer Complaints	3,12	2,31	3,70	8,57
19. Doctors Can Soothe Patient Anxiety	3,34	3,01	3,96	11,90
20. Seriousness of Officers When Serving Customers	3,38	3,01	4,01	12,06
21. Customer Satisfaction with Doctors	3,46	3,08	4,10	12,65
22. Customer Satisfaction with Hospital Facilities	3,44	3,08	4,07	12,53
23. Customer Satisfaction with the Overall, Good Facilities and Services	3,37	2,98	3,99	11,92
24. Customers Willing to Reselect ABC Hospital for Inpatient Care	3,23	3,02	3,83	11,55
25. Customers' Willingness to Recommend ABC Hospital to Others	3,16	2,96	3,75	11,10
WT (Weight Total) :				292,81

And after all is obtained, what should be done next is to add all weight scores to receive the W total or WT.

$$CSI = \frac{\sum W_i S_i}{\sum W_i} \times 100\% = \frac{292,814}{408} \times 100\% = 73,2\%$$

The results obtained are absolute index values of 73.2%. The index interpretation of 73.2% was included in the "satisfied" category, meaning that the customer satisfaction level in ABC Hospital is satisfied.

DISCUSSION

Satisfaction is a form of positive feeling after receiving a service or product. Hospital services can also be measured in the level of satisfaction. If the patient's expectation of a service is higher than the service that the patient has obtained, this makes them dissatisfied. In measuring various patient satisfaction levels, we can use several parameters, such as the Swedish Customer Satisfaction Barometer, the American Customer Satisfaction Index, the European Customer Satisfaction Index, the Swiss Customer Satisfaction

Index and the Malaysian Customer Satisfaction Index.⁶ In this study, we use the customer satisfaction index. This parameter, 25 aspects are assessed, ranging from employee uniforms to customers' willingness to recommend ABC Hospital to others. Based on the calculations we got using these parameters, we got a customer satisfaction level at the ABC Hospital of 73.2%.

When referring to the Decree of the Minister of Health of the Republic of Indonesia Number: 129 / Menkes / SK / II / 2008 concerning Minimum Hospital Service Standards, the results are obtained if the level of customer satisfaction is still below the standard set by the Ministry of Health. The Ministry of Health's decision on minimum hospital service standards shows if the predetermined criterion is more than 90%.⁴ Compared to our results, the value of customer satisfaction in ABC Hospitals was less than the standard. Improvement has to be taken by ABC Hospital so that the level of customer satisfaction can increase according to the standards set by the government.

Prasanna KS et al. reported that the patient was satisfied regarding services and clinical care availability. Meanwhile, the patient could have been more comfortable when the time spent in the pharmacy. The investigation costs were significantly moderate and high in 97% of the cases, as assessed by the respondents.⁷ Another study found that 82.8% of the respondents showed the doctor's approach was personal, the satisfaction rate of disease explanation was 81.6%, and 93.2% of the subjects were satisfied with the examination by the doctor.⁸ Empirical analysis of a study covering 31 countries for 2007, 2008, 2009 and 2012 on the level of satisfaction with health services obtained positive results for patient satisfaction levels and indicators of health service delivery, such as nurses and doctors per 100,000 population.⁹

Thus, several factors that contributed to patient satisfaction need to be evaluated. Through administrative reforms, the Netherlands has gradually incorporated competition mechanisms into the healthcare sector to improve the effectiveness of healthcare reform and

patient satisfaction. The UK is establishing a patient-centered philosophy and implementing competition mechanisms in general practitioners to improve the patient agency.¹⁰ To improve patient and medical staff satisfaction, the Obama Administration used health insurance as a turning point in reform. This reinforced the role of government by attempting to protect doctors from health insurance, medical authorization, and frivolous litigation.^{11,12} A questionnaire survey was conducted in Wuhan, China. Two thousand seven hundred nineteen questionnaires were collected, and 2,626 valid answer sheets were obtained. It was found that the “Medical staff’s service attitude” was the most important factor affecting patient satisfaction, followed by “Medical staff services technology” and “Hospital convenience.” The demographic characteristics of patients had no significant effect on satisfaction, and the “Medical services utilization” of patients had a certain impact on satisfaction. Patients had a higher degree of satisfaction with the “Hospital convenience,” “Hospital facilities and environment,” “Medical staff services technology,” and “Medical staff service attitude.” Still, they were less satisfied with “Medical expense” and “Reimbursement ratio for medical expenses”.¹³

The limitations of this article were that we only provided in sequence period patient satisfaction, it would be better for further study can provide the development of patient satisfaction with hospital updates, and we did not determine the factors that impact the patient’s satisfaction.

CONCLUSION

Our findings conclude that the value of inpatient customer satisfaction at Surabaya ABC Hospitalis was 73.2%, below the standard. The standard that the government has applied is 90%. The Importance-performance analysis method results indicate that there are 12 attributes of services or facilities whose performance meets the customers’ expectations. But, there are three attributes far from the customer’s expectations, namely parking space, the accuracy of the doctor’s visit time, and service waiting time. They have to be improved by hospital management to meet the standard of customer satisfaction. ABC Hospital, Surabaya, must consistently improve performance, especially for attributes found in quadrant I, so that customer satisfaction could increase.

DISCLOSURE

Ethical Clearance

The institution has approved this article.

Author Contribution

All of the authors contributed in all to the research process.

Funding

None.

Conflict of Interest

Corresponding authors, on behalf of all the authors of a submission, must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work.

REFERENCES

- Ihsani, D. W. (2005). Analisis Kepuasan Konsumen Terhadap Atribut Wisata Cangkung Garut, Jawa Barat. *Skripsi. Departemen Ilmu-ilmu Sosial Ekonomi Pertanian, Fakultas Pertanian, IPB. Bogor.*
- Indonesia, D. K. R. (2008). *Keputusan Menteri Kesehatan Republik Indonesia No. 129/Menkes. SK/II/2008.* Jakarta: Depkes RI.
- Kotler, P., & Keller, K. (2006). *Marketing Management: Customer Value, Customer Satisfaction and Customer Loyalty.* Upper Saddle River, New Jersey.
- Mardhotillah, R. R., & Rasyid, R. A. (2019). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Mahasiswa di PTS X Surabaya. *Accounting and Management Journal*, 3(2), 105-112.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *The Journal of Marketing*, 41-50.
- Ruhimat, D. (2008). *Kepuasan Pelanggan.* PT Gramedia Pustaka Utama, Jakarta.
- Suhendra, A., & Prasetyanto, D. (2016). Kajian Tingkat Kepuasan Pengguna Trans Metro Bandung Koridor 2 Menggunakan Pendekatan Importance-Performance Analysis. *REKA RACANA*, 2(2).
- Supranto, J. (2011). *Pengukuran Tingkat Kepuasan Pelanggan Rineka Cipta.*
- Suryawan, S. (2013). Analisa Hubungan Antara Experiential Marketing, Customer Satisfaction Dan Customer Loyalty Cafe Nona Manis Grand City Mall Surabaya. *Jurnal Strategi Pemasaran*, 1(2), 1-10.
- Utama, P. Y., Prihartini, A. E., & Listyorini, S. (2013). Analisis Tingkat Kepuasan Pasien Rawat Inap Rumah Sakit Islam Sultan Agung Semarang dilihat dari Dimensi Kualitas Pelayanan. *Jurnal Ilmu Administrasi Bisnis.*
- Wijaya, T. (2011). *Manajemen Kualitas Jasa.* Jakarta: PT. Indeks.



This work is licensed under a Creative Commons Attribution