

THE POSITIVE IMPACT OF SERVICE QUALITY, LOCATION, AND SITUATION ON PATIENTS' SATISFACTION IN HOSPITAL

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ABSTRACT

Identifying patient satisfaction is a significant aspect for institutions in the service sector, especially hospitals. Satisfied consumers use the service repeatedly and tell or persuade people to use it. Therefore, the aims of this study were (1) to determine whether service quality has a positive effect on patient satisfaction, (2) to determine whether location has a positive effect on patient satisfaction at a hospital, and (3) to determine whether the atmosphere has a positive effect on patient satisfaction. This study was conducted at a hospital XYZ in Pekalongan, Indonesia, with 400 respondents who filled out the questionnaire. The data collection technique used a questionnaire distributed electronically via Google Forms and processed using the Smart PLS application. Four hundred respondents participated in our study. Respondent demographic profiling included age, gender, last education, and patient status. Most of the participants were aged 25-45 years old (47,00%), female (74,25%), went to senior high school as their last education (54,00%), and had a history of hospitalization (98,25%). We found that service quality and ambiance positively impacted patients' satisfaction with a p-value of 0,000 and 0,000 ($p < 0,05$), while location did not ($p = 0,054$). Our study finds that service quality and atmosphere positively affect patient satisfaction.

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1. INTRODUCTION

Identifying patient satisfaction is a significant aspect for institutions in the service sector, especially hospitals. Satisfied customers will use the service repeatedly and inform or persuade others to use it. Satisfaction is an assessment made after receiving the service. At the very least, the benefits obtained should align with the patient's desires. Patient satisfaction is a point related to the evaluation of service quality. Service quality is a dynamic condition concerning goods, services, people, procedures, and the environment that meets desires. Service quality is the best service individuals, communities, or institutions provide to satisfy customers. The statement indicates that patient satisfaction heavily depends on the hospital's efforts to improve the quality of services. Our study aimed to prove the following three hypotheses.

Literature Review And Hypotheses Development

The Influence of Service Quality on Patient Satisfaction

According to Kotler and Keller, service quality refers to a set of characteristics and features of a product or service that depend on its ability to satisfy consumer demands (Kotler and Keller, 2016). Supported by research conducted by Hosang, Pambudy, and Rizal et al., the results of these studies state that service quality significantly influences patient satisfaction (Hosang, 2016; Pambudy, 2016; Rizal, Solikhah and Marwati, 2021).

H1: Service quality positively influences patient satisfaction at the Hospital XYZ Pekalongan.

The Influence of Location on Patient Satisfaction

Tjiptono describes that location refers to various marketing activities to facilitate the delivery and distribution of goods and services from producers to consumers (Tjiptono, 2015). The physical location of a business facility can also significantly impact a company's success. They are supported by research conducted by Pambudy, Firdiyansyah, Meutia, and Andiny, which state that location positively influences patient satisfaction (Pambudy, 2016; Firdiyansyah, 2017; Meutia and Andiny, 2019).

H2: Location positively influences on patient satisfaction at the Hospital XYZ Pekalongan.

The Influence of Ambience on Patient Satisfaction

A study by Utami stated that ambience is a combination of physical attributes such as architecture, layout, lighting, presentation, color, temperature, music, and aroma, collectively forming an image in one's mind (Utami, 2010). Supported by research conducted by Tiwa, Efkekmann, et al., and Susilo et al., it is found that ambience positively influences patient satisfaction (Susilawati, 2015; Tiwa, Soegoto and Lengkong, 2018; Efkekmann *et al.*, 2019)

H3: Ambience positively influences on patient satisfaction at the Hospital XYZ Pekalongan.

2. METHOD

This type of study is quantitative research. Next is the determination of the population and sample size. Since the population is unknown, the sample will be determined using the formula by Lemeshow et al. resulting in 384.16 individuals (Lemeshow et al., 1997). This number will be rounded up to 400 individuals. Therefore, it has been determined that the sample size for this study should be at least 400 individuals. All respondents were patients from a hospital in Pekalongan, Indonesia, which we will refer to as Hospital XYZ Pekalongan.

The sampling method used in this research is non-probability sampling, also known as non-random sampling, explicitly utilizing the purposive sampling technique. In this study, the researcher collects data using a questionnaire instrument measured on a Likert scale. The collected data will then be processed using the SmartPLS application. Validity and reliability tests will be conducted using the inner and outer models.

3. RESULT AND DISCUSSION

Respondents Demographics

Table 1. Demographics of the Respondents

Characteristic	Category	Frequency	Percentage
Age	< 17 years	21	5,25%
	17-24 years	101	25,25%
	25-49 years	188	47,00%
	50-64 years	71	17,75%
	> 65 years	19	4,75%
	Total	400	
Sex	Male	103	25,75%
	Female	297	74,25%
	Total	400	
Last Education	Primary school	61	15,25%
	Junior high school	39	9,75%
	Senior high school	216	54,00%
	Diploma	35	8,75%
	S-1	44	11,00%
	S-2	5	1,25%
	Total	400	
Patient's Status	With a history of hospitalization	393	98,25%
	Without a history of hospitalization	7	1,75%
	Total	400	

Outer Model

Table 2. Test Results of the Measurement Model (Outer Model)

Constructs and Items	Outer Loading
Service Quality (AVE = 0,444; CR = 0,952)	
Tangible (X1) (AVE = 0,548; CR = 858)	
X1.1 The doctors at the outpatient clinic of Hospital XYZ Pekalongan have a neat appearance.	0,636
X1.2 The doctors at the outpatient clinic of Hospital XYZ Pekalongan have an attractive appearance.	0,809
X1.3 The outpatient clinic at Hospital XYZ Pekalongan has facilities that	0,778

	are suitable for use.	
X1.4	The doctors at the outpatient clinic of Hospital XYZ Pekalongan carry medical attributes in accordance with standards.	0,748
X1.5	The facilities at the outpatient clinic of Hospital XYZ Pekalongan are easy to use.	0,719
Reliability (X2) (AVE = 0,606; CR = 0,885)		
X2.1	The outpatient clinic at Hospital XYZ Pekalongan opens on time.	0,801
X2.2	The outpatient clinic at Hospital XYZ Pekalongan always starts the doctor's practice according to the schedule.	0,752
X2.3	The doctors at the outpatient clinic of Hospital XYZ Pekalongan arrive on time.	0,790
X2.4	The doctors at the outpatient clinic of Hospital XYZ Pekalongan provide consistent service in each appointment.	0,798
X2.5	The doctors at the outpatient clinic of Hospital XYZ Pekalongan perform thorough examinations.	0,751
Responsiveness (X3) (AVE = 0,618; CR = 0,890)		
X3.1	The doctors at the outpatient clinic of Hospital XYZ Pekalongan provide comprehensive explanations regarding my complaints.	0,720
X3.2	The doctors at the outpatient clinic of Hospital XYZ Pekalongan provide service to me regardless of social status.	0,764
X3.3	The outpatient clinic at Hospital XYZ Pekalongan is always responsive in serving patients.	0,807
X3.4	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always respond to patient complaints well and attentively.	0,834
X3.5	The doctors are always proactive in providing solutions (aside from medication) to patients if new complaints arise during the examination.	0,801
Assurance (X4) (AVE = 0,602; CR = 0,883)		
X4.1	The doctors at the outpatient clinic of Hospital XYZ Pekalongan have extensive knowledge to handle patients.	0,738
X4.2	The doctors at the outpatient clinic of Hospital XYZ Pekalongan are always open to criticism.	0,762
X4.3	The doctors at the outpatient clinic of Hospital XYZ Pekalongan are always open to suggestions.	0,781
X4.4	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always provide advice and input in a gentle tone without pressure or coercion towards patients.	0,802
X4.5	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always prioritize the interests of the patients above their own.	0,793
Empathy (X5) (AVE = 0,625; CR = 0,893)		
X5.1	The doctors at the outpatient clinic of Hospital XYZ Pekalongan are able to respond to patients with friendliness.	0,802
X5.2	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always prioritize the interests of the patients.	0,792
X5.3	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always initiate the examination by greeting the patients first.	0,794
X5.4	The doctors at the outpatient clinic of Hospital XYZ Pekalongan always express gratitude and wishes for a speedy recovery to the patients at the end of the service.	0,774
X5.5	During the service, the doctors at the outpatient clinic of Hospital XYZ Pekalongan always maintain a respectful manner of speaking to ensure comfortable communication with patients.	0,790
Location (XX) (AVE = 0,567; CR = 0,867)		
XX2	In my opinion, there are many options for public transportation to reach Hospital XYZ Pekalongan.	0,730
XX3	In my opinion, the location of Hospital XYZ Pekalongan can be easily	0,786

	found.	
XX4	When I first arrived, the location of the outpatient clinic at Hospital XYZ Pekalongan was easy to find.	0,798
XX5	The outpatient clinic at Hospital XYZ Pekalongan has adequate parking space.	0,698
XX6	The outpatient clinic at Hospital XYZ Pekalongan can accommodate the needs of patients in case of overcrowding.	0,748
Ambiance (XXX) (AVE = 0,723; CR = 0,959)		
XXX1	In my opinion, the waiting area at Hospital XYZ Pekalongan makes me feel comfortable.	0,857
XXX2	In my opinion, the patient waiting area at Hospital XYZ Pekalongan is clean.	0,818
XXX3	In my opinion, the seating arrangement in the waiting area at Hospital XYZ Pekalongan is tidy.	0,830
XXX4	In my opinion, the placement of posters in the waiting area at Hospital XYZ Pekalongan is in line with the room's theme.	0,872
XXX5	In my opinion, the music played in the waiting area at Hospital XYZ Pekalongan makes me feel comfortable.	0,804
XXX6	In my opinion, the videos played in the waiting area at Hospital XYZ Pekalongan are interesting to watch.	0,818
XXX7	In my opinion, the lighting in the waiting area at Hospital XYZ Pekalongan is suitable for the needs.	0,860
XXX8	In my opinion, the waiting area at Hospital XYZ Pekalongan has clean toilet facilities.	0,908
XXX9	In my opinion, the waiting area at Hospital XYZ Pekalongan has pleasantly scented toilet facilities.	0,879
Patient Satisfaction (Y) (AVE = 0,675; CR = 0,910)		
Y1	The services provided by the doctors at Hospital XYZ Pekalongan meet my expectations.	0,880
Y2	I feel satisfied with the services provided by the doctors at Hospital XYZ Pekalongan.	0,923
Y3	I do not feel disappointed with the services provided at Hospital XYZ Pekalongan.	0,816
Y4	The doctors at Hospital XYZ Pekalongan provide clear explanations of the consultation results.	0,870
Y5	Throughout the service, the doctors at the outpatient clinic of Hospital XYZ Pekalongan always provide good care.	0,573

All variables included were found reliable to measure its constructing variable. Additionally, each of the variables had composite reliability value between 0.7 – 0.95, therefore the indicators have shown internal consistency and indicator redundancy was not found. The AVE values were also ≥ 0.5 except for the service quality, therefore all remaining indicators are considered valid to be used in the study.

Table 3. Discriminant Validation Test Results/Fornell-Lacker

	Assurance	Empathy	Patient Satisfaction	Service Quality	Location	Reliability	Responsiveness	Ambiance	Tangible
Assurance	0,776								
Empathy	0,736	0,790							
Patient Satisfaction	0,427	0,444	0,822						
Service Quality	***	***	0,530	0,666					
Location	0,493	0,519	0,530	0,583	0,753				
Reliability	0,694	0,616	0,497	***	0,510	0,778			

ity									
Responsive-ness	0,732	0,784	0,429	***	0,469	0,644	0,786		
Ambiance	0,424	0,380	0,652	0,537	0,635	0,531	0,438	0,850	
Tangible	0,583	0,634	0,487	***	0,521	0,656	0,666	0,554	0,740

The table above shows the diagonal values have higher values compared to AVE shown in the previous table. We concluded that out of the outer model parameters, all variables are considered valid and reliable to measure each of its construct specifically.

Multicollinearity

Table 4. Inner VIF Value

	<i>Service Quality</i>	<i>Location</i>	<i>Ambiance</i>
Assurance	1,000	-	-
Empathy	1,000	-	-
Patient's satisfaction	1,630	1,943	1,803
Service quality	-	-	-
Location	-	-	-
Reliability	1,000	-	-
Responsiveness	1,000	-	-
Ambiance	-	-	-
Tangible	1,000	-	-

From table 4, it can be concluded that none of the independent variables have a VIF value greater than five, indicating that there is no multicollinearity issue among the variables in this research model.

Determinant Coefficient

Table 5. R-Square Value

	R ²	Interpretation
Assurance	0,764	<i>Strong</i>
Empathy	0,778	<i>Strong</i>
Patient's satisfaction	0,476	<i>Weak</i>
Reliability	0,700	<i>Moderate</i>
Responsiveness	0,800	<i>Strong</i>
Tangible	0,658	<i>Moderate</i>

Based on the data presented in the table above, it can be observed that the R-Squared value for the Patient Satisfaction variable is 0.476. This value indicates that 47.6% of patient satisfaction can be explained by service quality, location, and ambiance, while the remaining 52.4% can be predicted or explained by other variables not included in this study.

Effect Size

Table 6. F-Square Value

Variable	f ²
Ambiance → Patient Satisfaction	0,231
Service Quality → Patient Satisfaction	0,055
Location → Patient Satisfaction	0,011

According to the analysis of effect size presented in Table 6, it is found that the ambiance variable has an f² value greater than 0.15, and the service quality variable has an f² value greater than 0.02, indicating that they significantly influence patient satisfaction. The ambiance variable falls into the medium category, while the service quality variable falls into the small category.

Predictive Relevance Value

Table 7. Q² Square Value

	Q ²
Assurance	0,456
Empathy	0,481
Patient's satisfaction	0,308
Service Quality	-
Location	-

Reliability	0,418
Responsiveness	0,490
Ambiance	-
Tangible	0,352

Referring to Table 7, the Q2 value for Patient Satisfaction is 0.308, meaning that service quality, location, and ambiance are significant in predicting patient satisfaction. Furthermore, with a value of 0.308, the predictive ability is considered moderate.

Study Results

Table 8. Hypothesis Test Result

Hypothesis	Standardized Path coefficient	t statistics	p values	Conclusion
H1: Service quality positively influences patient satisfaction at the hospital	0,216	4.061	0.000	Accepted
H2: Location positively influences patient satisfaction at the hospital	0,108	1.604	0.054	Rejected
H3: Ambiance positively influences patient satisfaction at the hospital	0,467	7.578	0.000	Accepted

From Table 8, it is known that two out of three proposed hypotheses are accepted. This conclusion is based on the significant influence of coefficient values that align with the direction of the proposed hypotheses. However, one hypothesis is rejected due to an inconsistent coefficient value.

Importance-Performance Analysis

Table 9. IPMA Indicator Value

	Construct Performances for Patient's Satisfaction	Construct Importance for Patient's Satisfaction
X1.1	88,083	0,005
X1.2	62,750	0,009
X1.3	79,375	0,008
X1.4	84,000	0,010
X1.5	68,000	0,009
X2.1	85,500	0,008
X2.2	85,917	0,007
X2.3	82,125	0,009
X2.4	83,000	0,009
X2.5	82,875	0,010
X3.1	65,500	0,009
X3.2	62,750	0,009
X3.3	81,125	0,010
X3.4	66,750	0,010
X3.5	81,750	0,010
X4.1	85,125	0,009
X4.2	83,125	0,009
X4.3	82,625	0,009
X4.4	64,000	0,010
X4.5	84,375	0,010
X5.1	63,750	0,009
X5.2	82,125	0,010
X5.3	68,250	0,010
X5.4	64,500	0,010
X5.5	81,250	0,009
XX2	87,000	0,007
XX3	90,083	0,019
XX4	91,833	0,023
XX5	84,125	0,011
XX6	79,417	0,016
XXX1	89,250	0,032

XXX2	93,563	0,051
XXX3	88,333	0,040
XXX4	89,917	0,047
XXX5	92,250	0,029
XXX6	89,000	0,031
XXX7	84,000	0,045
XXX8	87,500	0,047
XXX9	85,917	0,034
Mean	80,790	0,017

From table 9, it is known that the average value of the IPMA indicator for performance is 80.790, while for importance it is 0.017. Based on these results, two straight lines can be drawn to create four quadrants in the mapping graph as follows.

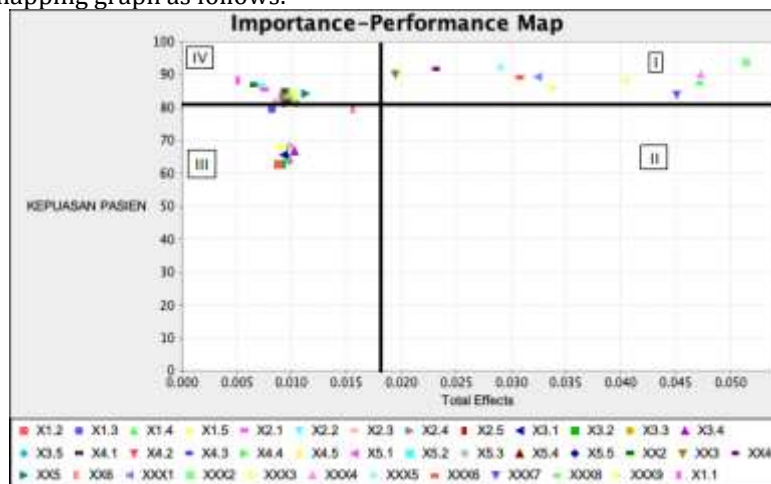


Figure 1. Importance-Performance Graph

At the indicator level in the above figure, it can be seen in the IPMA indicator that there are eleven (11) indicators located in the upper-right quadrant (quadrant I), two of which are indicators for the variable "Location" and the remaining nine are indicators for the variable "Ambience." The eleven indicators are XX3, XX4, XXX1, XXX2, XXX3, XXX4, XXX5, XXX6, XXX7, XXX8, and XXX9. The remaining indicators are located in quadrant III and quadrant IV. Specifically, 17 indicators are in quadrant IV, and 11 in quadrant III.

Discussion

The success of this research is primarily due to the characteristics of the respondents. These respondents are the ones who consistently meet and directly experience the quality of service they receive. Although each respondent may have their criteria in determining their level of satisfaction, in this study, the researcher successfully combined the opinions of the 400 collected respondents and processed them into data for this research. After completing this study, it is hoped that it will provide valuable input to the management of the respective hospital. The findings of this research have revealed that the level of service quality positively influences patient satisfaction. Therefore, if the service quality received by patients meets their standards and is successful, it will undoubtedly impact patient satisfaction. This can be proven by the descriptive analysis above and the testing results using the SmartPLS application. In addition to service quality, there is also the ambience variable that positively influences patient satisfaction. Referring to the descriptive analysis, the ambience variable received an excellent rating compared to other variables. This means that every patient who comes to the hospital feels satisfied because of the high level of comfort they experience due to the ambience at the hospital.

4. CONCLUSION

Based on the results, our study concluded several points as follows: Service quality has been proven to have a significant positive influence on Patient Satisfaction. If the perception of service quality increases, the satisfaction of patients will also increase. Location has been found to have a limited impact on patient satisfaction. Therefore, if the perception of the location decreases, patient satisfaction may not necessarily decrease. Ambience has been proven to have a significant positive influence on Patient Satisfaction. If the perception of the ambience improves, the satisfaction of patients will also increase. Our

study has several limitations on the influence of service quality, location, and ambiance on patient satisfaction. Firstly, this research was only empirically tested, which may limit the generalizability of the findings. It is recommended for future research to include a more significant number of hospitals within a region to obtain broader coverage, such as from across Indonesia, allowing for a larger sample size to generalize the analysis to a broader population level. Secondly, this study used a questionnaire instrument distributed online, which indirectly limits the respondents to the age group that actively uses social media and other online communication platforms where the questionnaire was disseminated. A recommendation for future research is to incorporate data collection methods other than online, such as adding face-to-face interactions (exit interviews) through direct discussions with patients immediately after they complete their medical examinations.

REFERENCES

- Efkemann, S.A. *et al.* (2019) 'Ward atmosphere and patient satisfaction in psychiatric hospitals with different ward settings and door policies. Results from a mixed methods study', *Frontiers in Psychiatry*, 10, p. 576.
- Firdiyansyah, I. (2017) 'Pengaruh kualitas pelayanan, harga, dan lokasi terhadap kepuasan pelanggan pada warung gubrak KEPRI mall Kota Batam', *Jurnal Elektornik*, 1(1), pp. 1-9.
- Hosang, N. (2016) 'Analisis Pengaruh Kualitas Pelayanan dan Harga Terhadap Kepuasan Pasien (Studi Kasus pada Rumah Sakit Siloam Manado)', *Jurnal Berkala Ilmiah Efisiensi*, 16(1).
- Kotler, P. and Keller, K.L. (2016) *Manajemen Pemasaran*. 12th edn. Jakarta: PT. Indeks.
- Lemeshow, S. *et al.* (1997) 'Besarnya sampel dalam penelitian kesehatan', *Yogyakarta: Gajah Mada University* [Preprint].
- Meutia, R. and Andiny, P. (2019) 'Pengaruh Kualitas Pelayanan dan Lokasi Terhadap Kepuasan Pasien Puskesmas Langsa Lama', *Niagawan*, 8(2), pp. 121-130.
- Pambudy, A.P. (2016) 'Analisis pengaruh kualitas pelayanan dan lokasi terhadap kepuasan pasien di Puskesmas Dukun Gresik', *JPIM (Jurnal Penelitian Ilmu Manajemen)*, 1(1), pp. 11-Halaman.
- Rizal, F., Solikhah, S. and Marwati, T.A. (2021) 'Impact of Service Quality on Patient Satisfaction: A Study at Physiotherapy Unit PKU Muhammadiyah Hospital of Yogyakarta', *International Journal of Scientific & Technology Research*, 10(4).
- Susilawati, D. (2015) 'Hubungan antara dukungan keluarga dengan tingkat kecemasan penderita kanker serviks paliatif DI RSUP DR Sardjito Yogyakarta', *Jurnal keperawatan*, 4(2), pp. 1-14.
- Tiwa, C., Soegoto, A.S. and Lengkong, V.P.K. (2018) 'ANALISIS KUALITAS PRODUK, SUASANA, DAN KUALITAS JASA LAYANAN TERHADAP KEPUASAN PASIEN (STUDI PADA PUSKESMAS BENGKOL MANADO)', *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 6(4).
- Tjiptono, F. (2015) *Strategi Pemasaran*. Yogyakarta: Andi Offset.
- Utami, C.W. (2010) 'Manajemen Ritel_Strategi dan Implementasi Operasional Bisnis Ritel Modern Di Indonesia'. 2010-ISBN: 978-979-061-127-6-Salemba Empat.