

Quality Analysis of Health Center Service Management for Efforts to Improve Patient Satisfaction

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ABSTRACT

Health Centers providing the best quality of service can affect consumer satisfaction in using services. If the quality of service, facilities, and promotions consumers offer is unsatisfactory, consumers no longer use Health Center services. This research focuses on consumer satisfaction with the services provided by the Health Center after using these services and what attributes need to be improved to increase customer satisfaction. This study aims to determine patient satisfaction with the services provided by Health Center X. The method used in this study is IPA (Importance Performance Analysis). This method, also known as quadrants analysis, aims to measure the relationship between consumer perception and the priority of improving the quality of products or services. Twenty-one attributes or statements represent each service dimension: tangibles, empathy, reliability, responsiveness, and assurance. For the quality of services provided by the Health Center to be improved, the Puskesmas must make improvements as soon as possible to statements that fall into the categories that need improvement, namely the words "Large car or motorcycle parking," "Officers carry out administrative processes quickly and precisely," "The ability of the Health Center to respond to complaints, criticisms, and suggestions from patients," and "Guarantee of trust given by officers to services." Puskesmas gets a customer satisfaction level value of 79.03%, which means that the performance given by the Health Center to customers or patients is included in the Satisfied category.

Keywords: Importance Performance Analysis, Patient Satisfaction, Health Centers, Health Management

INTRODUCTION

Health Center is a functional organization that organizes health efforts that are comprehensive, integrated, equitable, acceptable, and affordable to the community, with active community participation and using the results of the development of appropriate science and technology at costs that the government and society can bear (Le, 2023). These health efforts are carried out by focusing on services for the wider community to achieve optimal health status without neglecting the quality of individuals (Gai, 2023)(Magno, 2023). Puskesmas is a technical implementation unit of the district/city office responsible for organizing health development in the work area (Chuang, 2023).

Health Center must be able to maintain the quality of services provided so that consumers feel satisfied with the services offered by prioritizing comfort, friendliness, and safety so that consumers feel satisfaction with the services provided by the Health Center can minimize complaints from consumers on Health Center health services. Health Centers in providing the best quality of service can affect consumer satisfaction in using services. If the quality of services, facilities, and promotions consumers offer is unsatisfactory, consumers no longer use Health Center services or move to similar health services (Akbar, 2023).

In this study, interviews were conducted with customers in Health Center X about problems or dissatisfaction felt by customers when receiving service. The following can be seen in Table 1: a recapitulation of the results of respondents' answers.

Table 1 Results From Respondents' Answers

No	Statement	Respondent's Answers
1	What is the attitude of employees to patients?	Less Friendly

2	How do you feel at Health Center X?	Inadequate facilities
3	What kind of service do you want?	Fast and not long waiting
4	What kind of facilities do you need and want?	Air conditioning and comfortable seats
5	What percentage of satisfaction level with Health Center X services	The average patient answered below the value of 70

This research focuses on consumer satisfaction with the services provided by the Siak Hulu II Health Center after using these services and what attributes need to be improved to increase customer satisfaction. The purpose of this study is to determine the level of consumer satisfaction with the services provided by Health Center X.

Martilla and James first introduced the IPA (Importance Performance Analysis) method. This method, also known as quadrant analysis, aims to measure the relationship between consumer perception and the priority of improving the quality of products or services (Agarwal, 2023)(Oey, 2023). Based on the assessment results of the level of importance and the effects of performance assessment, a calculation will be produced regarding the status of conformity between significance and the level of implementation (Sumrit, 2023). The story of suitability will determine the priority order of increasing factors that affect consumer satisfaction (Ziwei, 2023)(Al-Dhaafri, 2023).

The Customer Satisfaction Index method is an index to determine the overall level of customer satisfaction with an approach that considers the importance of the attributes of the product or service being measured (Vena-Oya, 2023). Customer Satisfaction Index provides precise data on customer satisfaction so that at a particular unit of time, it can conduct periodic evaluations to improve what is lacking and improve services that customers consider to be an added value (Aicher, 2023)(Qian, 2023).

METHODS

Data Collection Tools and Techniques

1. Questionnaire making and questionnaire dissemination

At this stage, a questionnaire was made, and the questions were arranged according to direct observations in the field. A random questionnaire was distributed to 100 customers of Health Center X (Tuan, 2022).

2. Samples

Data collection can be done on a population using census and sampling techniques or taking random samples. The sample is a portion or representative of the population under study. It is called sample research if we intend to conclude something that applies to the people. The minimum sample can be determined based on calculations using the following Formula (Al-Dhaafri, 2023; Fakfare, 2023; Ikasari, 2022; Nuraina, 2022; Syah, 2022):

$$n = p(1 - p) \left(\frac{z_{\alpha-2}}{E} \right)^2$$

Where:

n = Total population

E = Desired sample error

P = Actual proportion in population. divided into two parts for a total of 100% (or 1)

z = The confidence level used by 90% of the z value is 1.65

Validity Test

Validity testing can be done by knowing the correlation of each attribute item with the total value obtained. The general Formula for calculating this correlation can be seen in the Formula. The rxy value is then compared with the r table. rxy is greater than the r table; hence, the attribute is declared valid (Aprilia, 2022; deSouza, 2022; Gai, 2022; Ji, 2022; Wohlfart, 2022).

$$r_{xy} = \frac{N \sum XY - \sum X \sum Y}{\sqrt{(N \sum X^2) - (\sum X)^2 (N \sum Y^2 - (\sum Y)^2)}}$$

Where:

- rx_y = Correlation coefficient of an attribute
- N = Number of subjects
- X = Score of an attribute
- Y = Total score

Reliability Test

Reliability tests are performed on question items that are declared valid. This test measures a questionnaire, an indicator of a variable or construct (Lankia, 2022)(Choy, 2022). A variable is reliable if it has a Cronbach Alpha ($\alpha_{Cronbach}$) more than the r table. The calculation to estimate reliability is to use the Cronbach alpha formula as in the Formula (Aghajanzadeh, 2022; Fan, 2022; Luo, 2022; Ma, 2022; Sukardi, 2022; Zhou, 2022):

$$r_{11} = \frac{k}{k-1} \times \left\{ 1 - \frac{\sum S_i}{S_t} \right\}$$

Where:

- r₁₁ = reliability value
- $\sum i$ = The sum of the variances in each item's score
- t = Total variance
- k = Number of items

Data Processing Techniques

Data processing can be done with the following stages:

1. Process questionnaires (determining the number of valid or not defective), including completeness of answer meaning, consistency between answers (only one answer for each question), and relevance of solutions. Then, the incoming data (raw data) will be entered into the table (Girma, 2022; Le, 2023; Nguyen, 2022; Preziosi, 2022).
2. A data adequacy test determines respondents' sample size adequacy. Using a 90% confidence level and a 10% error rate, the minimum sample size required was 68, but the authors took 100 respondents.
3. Test validity and reliability to determine whether the data is valid and reliable or by expectations. In this study, validation and reliability tests used SPSS software version 20.0 (Hu, 2022; Rishi, 2022).
4. Data processing and analysis using IPA and CSI. This research measures service quality (Das, 2022; Mejia, 2022).

RESULTS

Validity Test

A validity test is a way to measure whether the questionnaire that has been distributed to respondents is valid or not. This validity test can be done manually or with the help of the SPSS application. In this study, the validity test was carried out using the Corrected Correlation technique using the SPSS application version 20.0.

Table 2 Test the Validity of Puskesmas Consumer Questions

Number	Statement	r_{Count}		r_{table}	Status
		Interests	Satisfaction		
Tangible					

1	The Health Center building looks beautiful	0.272	0.208	0.197	Valid
2	Spacious car/motorbike parking	0.477	0.285	0.197	Valid
3	Complete and adequate medical equipment	0.197	0.238	0.197	Valid
4	The Health Center building is clean, neat and comfortable	0.265	0.367	0.197	Valid
5	Health workers are neat and clean in appearance	0.713	0.480	0.197	Valid
Empathy					
6	The officer always gives a smile and greets the patient	0.741	0.634	0.197	Valid
7	Staff provide the same service to all patients	0.810	0.695	0.197	Valid
8	Staff give personal attention to patients	0.713	0.770	0.197	Valid
9	Officers can understand complaints and provide solutions to patient problems	0.753	0.682	0.197	Valid
10	Officers are serious about providing services	0.776	0.724	0.197	Valid
Reliability					
11	The clerk was polite and friendly	0.699	0.566	0.197	Valid
12	Skills and proficiency of officers in serving patients	0.631	0.548	0.197	Valid
13	Officers provide information before services are provided	0.656	0.691	0.197	Valid
Responsiveness					
14	Officer readiness when needed	0.332	0.644	0.197	Valid
15	Officers carry out the administrative process quickly and precisely	0.261	0.395	0.197	Valid
16	The ability of the Health Center to respond to complaints, criticisms, and suggestions from patients	0.587	0.677	0.197	Valid
Assurance					
17	Officers are skilled in serving patients	0.663	0.752	0.197	Valid
18	Officers can communicate well with patients	0.766	0.629	0.197	Valid
19	Officers provide complete medicines or medical equipment	0.796	0.633	0.197	Valid
20	Officers have good knowledge according to their expertise	0.564	0.464	0.197	Valid
21	Guarantee of trust given by officers to the service	0.571	0.569	0.197	Valid

Reliability tests are used to determine the concentration of measuring instruments. The reliability test results can be seen in Table 3 and Table 4.

Table 3 Reliability Test of Statement of Interest

Reliability Statistics	
Cronbach's Alpha	N of Items
.906	21

Table 4 Reliability Test Statement of Satisfaction

Reliability Statistics	
Cronbach's Alpha	N of Items
.885	21

The reliability test results can be declared reliable if the value of Cronbach's Alpha is more significant than 0.6. So, the items of the questionnaire statement can be displayed as reliable because the questionnaire that has been distributed shows stability after being measured using the attributes of the information.

Importance Performance Analysis (IPA)

The level of suitability is a calculation used to determine which ones need to be prioritized according to the factors that affect Puskesmas consumers.

Table 5 Conformity Levels

No	Statement	Score		Conformity
		Interests	Satisfaction	
Tangible				
1	The Health Center building looks beautiful	412	370	89.80%
2	Spacious car/motorbike parking	459	366	79.73%
3	Complete and adequate medical equipment	474	431	90.92%
4	The Health Center building is clean, neat and comfortable	482	407	84.43%
5	Health workers are neat and clean in appearance	439	401	91.34%
Empathy				
6	The officer always gives a smile and greets the patient	445	399	89.66%
7	Staff provide the same service to all patients	453	380	83.88%
8	Staff give personal attention to patients	442	380	85.97%
9	Officers can understand complaints and provide solutions to patient problems	446	387	86.77%
10	Officers are serious about providing services	446	396	88.78%
Reliability				
11	The clerk was polite and friendly	456	390	85.52%
12	Skills and proficiency of officers in serving patients	451	385	85.36%
13	Officers provide information before services are provided	441	388	87.98%
Responsiveness				
14	Officer readiness when needed	475	406	85.47%
15	Officers carry out the administrative process quickly and precisely	474	366	77.21%
16	The ability of the Health Center to respond to complaints, criticisms, and suggestions from patients	469	363	73.18%
Assurance				
17	Officers are skilled in serving patients	445	392	88.08%
18	Officers can communicate well with patients	448	385	85.93%
19	Officers provide complete medicines or medical equipment	453	399	88.07%

20	Officers have good knowledge according to their expertise	454	398	87.66%
21	Guarantee of trust given by officers to the service	455	381	83.73%
Average		85.68%		

Determine the division of the area of the intersection of two perpendicular lines (\bar{Y}) and $:(\bar{X})$ by the Formula,

$$\bar{Y} = \frac{\sum_{i=1}^n \bar{Y}}{K} = \frac{95.19}{21} = 4.53 \text{ then } \bar{X} = \frac{\sum_{i=1}^n \bar{X}}{K} = \frac{81.20}{21} = 3.86$$

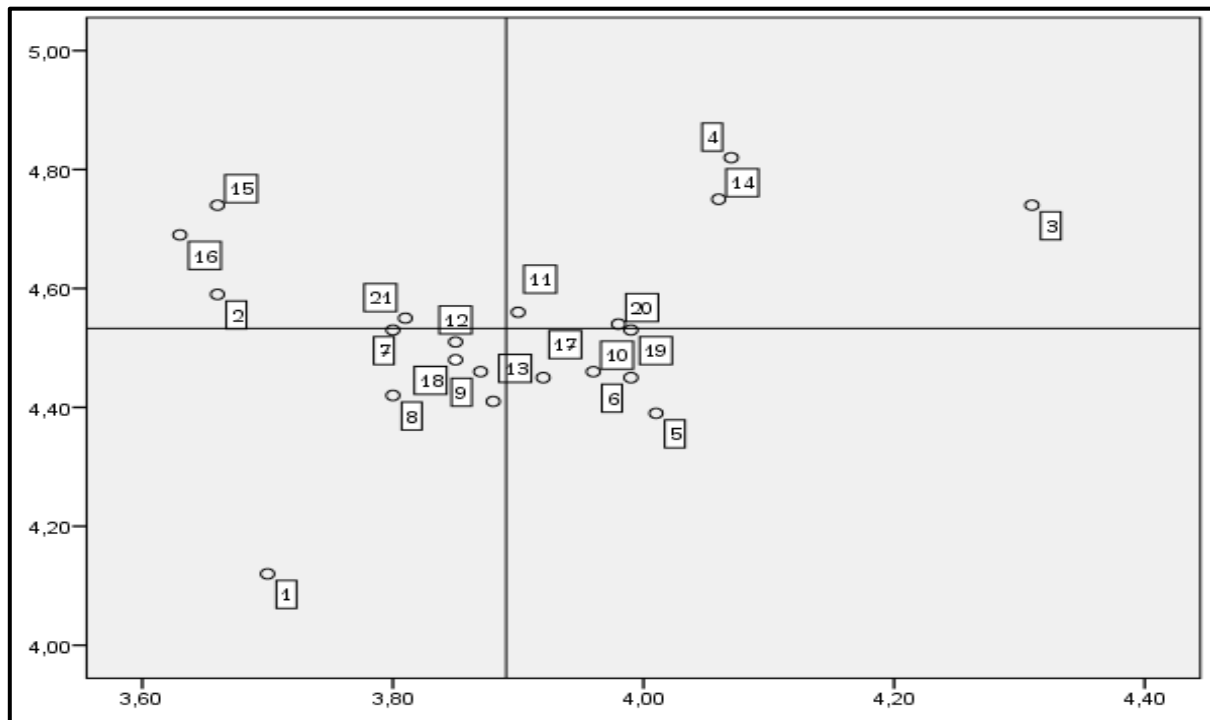


Figure 1 Cartesian Diagram

The statement in quadrant III is statement number 1: "The Health Center building looks beautiful and attractive" (Tangible). Statement number 7, namely "Officers provide equal service to all patients" (Empathy), statement number 8, namely "Officers give personal attention to patients" (Empathy), statement number 9, namely "Officers can understand complaints and provide solutions to patient problems" (Empathy), statement number 13 is "Officers provide information before services are provided" (Reliability). Statement number 18 is "Officers can communicate well to patients" (Assurance).

Quadrant IV is less important to customers because the importance level is too low, and the performance level given is too excessive so that it satisfies the customer. The statements in this quadrant are statement number 5, namely, "Health workers look neat and clean" (Tangible). Statement number 6, namely "Officers always give smiles and greetings to patients" (Empathy), statement number 10, "Officers are serious in providing services" (Empathy), statement number 17, namely "Officers are skilled in serving patients" (Assurance). Statement number 19, namely Officers provide complete medicines or medical devices.

DISCUSSION

Customer satisfaction analysis is obtained by dividing the weighted average value by the maximum scale carried out on data processing. Based on the results of the customer satisfaction index value received by the Puskesmas with a score of 79.03, it is included in the scale range of 66 to 80 based on performance and importance in the statement, which means it is in the Satisfied category. Results In This Study In Line With (Aqil, 2020) The results show that the better the hospital services provided to patients, the significantly increased

outpatient satisfaction in hospitals. Patient satisfaction depends on the quality of service. Service is all efforts made by employees to fulfill the wishes of their customers with the services to be provided. Customer satisfaction is an after-purchase evaluation where the chosen alternative at least gives results equal to or exceeds customer expectations. At the same time, dissatisfaction arises if the results obtained do not meet customer expectations. (Astari et al., 2021) Research Results: The quality of nursing service is satisfied in the tangibles dimension of 57.90%, reliability 58.04%, responsiveness 62.65%, assurance 58.18%, and empathy 58.74%. However, based on the IPA gap analysis, four negative values must be improved, namely the dimensions of tangibles, reliability, responsiveness, and assurance. The results of the (Manurung et al., 2022) study with the servqual method obtained an average performance level of 3.73 and an inpatient expectation level of 3.85, where, from 36 attributes, it is known that nine points have positive gap values. The calculation of the five Servqual dimensions shows that the highest gap value is in the Assurance dimension of -1.55, and the dimension with the lowest gap value is in the Reliability dimension of -0.25. There are nine attributes in quadrant I that are priorities for improving RSIA Nabasa and proposals to improve the quality of health services based on the results of cartesian diagram mapping using the Importance Performance Analysis (IPA) method.

The statements in quadrant I are statement number 2, namely "Large car or motorcycle parking" (Tangible). Statement number 15, namely "Officers carry out administrative processes quickly and precisely" (Responsiveness), statement number 16, namely "The ability of Health Center to respond to complaints, criticisms, and suggestions from patients" (Responsiveness), and statement number 21 namely "Assurance of trust given by officers to services" (Assurance). (Rahmawati & Deharja, 2020) The research cartesian diagram is divided into four quadrants: top priority, maintained, low priority, and considered excessive. The result of the gap value based on quality, delivery, safety, and morale is < -1 , but based on security, one attribute of the question has a gap > -1 . The primary improvement efforts resulting from brainstorming are monitoring cleaning service performance and conducting public speaking training for officers to improve communication. Quadrant II is to customers' expectations, so the satisfaction level is relatively high. So, the statements in this quadrant must be maintained because they make superior service in customers' eyes. The statements in this quadrant are statement number 3, namely "Complete and adequate medical equipment" (Tangible). Statement number 4 namely "The Health Center building is clean, neat and comfortable" (Tangible), statement number 11 is "Officers are polite and friendly" (Reliability), statement number 14 is "Readiness of officers when needed" (Responsiveness), and statement number 20 is "Officers have good knowledge according to their expertise" (Assurance). (Aulia et al., 2019) Research Attribute Gap Value to Know the Quality of Service Provided by RSI Siti Rahmah Padang Of the 15 service attributes tested, only one point has a positive gap and can meet customer satisfaction. The attribute is that the patient is easy to obtain information. Meanwhile, the remaining 14 attributes have negative gap values. The gap in the study is Gap 5 Services felt (received) by consumers because they do not meet consumer expectations. Thus, it can be concluded that the quality of services the hospital provides.

CONCLUSION

Twenty-one attributes or statements represent each service dimension: tangibles, empathy, reliability, responsiveness, and assurance. For the quality of services provided by the Puskesmas to be improved, the Health Center must make improvements as soon as possible to statements that fall into the categories that need improvement, namely the statements "Large car or motorcycle parking," "Officers carry out administrative processes quickly and precisely," "The ability of the Health Center Health Center to respond to complaints, criticisms, and suggestions from patients," and "Guarantee of trust given by officers to services." Health center gets a customer satisfaction level value of 79.03%, which means that the performance given by the Health Center to customers or patients is included in the Satisfied category.

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