
**Analysis Quality of Service using Service Performance and Importance
Performance Analysis Method at Community Health Center****Fannysah Della Puspita¹, Enny Aryanny²**fannysahdellapuspita@gmail.com, enny.ti@upnjatim.ac.id^{1,2}Department of Industrial Engineering, Universitas Pembangunan Nasional Veteran Jawa Timur

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Abstract

Community health center is a health services in Indonesia that aims to organize first-level public health efforts. The current condition observed in level one health centers in Indonesia relates to the services provided. A large portion of patients who have experienced the services express dissatisfaction with the level of service provided. This research aims to determine the quality of service in community health center and provide advices to improve the quality of health center services. The method used in this research is the Servperf method and Importance Performance Analysis. Based on research with the service performance method, the mean performance level is 3,39 and the mean importance level is 4,38. Meanwhile, the Importance Performance Analysis obtained the level of conformity between performance and importance is 77,49% with seven attributes of service quality dimensions that enter quadrant I and are the top priority for improvement. The proposed improvements are made to improve the quality of health center services in the future by adjusting the main priority attributes of improvements to the Importance Performance Analysis diagram.

A. Introduction

Health is one of the most important indicators in measuring a country's standard of living [1]. Improving and equitable distribution of quality health services supported by employee performance needs to be done in order to realize public health welfare [2]. Service focuses on fulfilling the wants and needs visitors provided by companies or agencies so that visitors feel safe, comfortable, and confident in carrying out their activities. In fulfilling needs, patients will feel satisfied if the level of service is high and will feel dissatisfied if the level of service is low [3]. In the service industry, health services are efforts carried out the aim of restoring health, preventing and curing disease, and improving the health of individuals, families, and community groups [4], [5].

One of the public health services is community health center [6]. Based on the Regulation of the Minister of Health Number 43 of 2019, community health center is a public health center that provides health service facilities and organizes first-level individual health efforts [7]. In the data from the Central Statistics Agency of East Java Province of 2022, Surabaya City has the highest number of community health center, which is 63. The community health center have a vision of "Quality and Professional Health Center Services to Achieve Optimal Public Health". Be in reality, community health center still often get complaints from patients regarding the services provided, one of which is at the community health center X. According to review data that can be seen on Google reviews belonging to community health center X, it shows that community health center obtained a rating of 3,3 out of 5 with a total of 178 reviews. Based on visitor data belonging to community health center X in 2023, 99,98% are outpatients and 0,2% are inpatients. As well a based on pre-survey interviews that have been conducted with 30 people who have experienced services at community health center X, the are several complaints, namely the waiting time for the service queue which is quite long, the examination service is not optimal because it is only asked about complaints without any examination, the use of facilities that are lacking, and in providing services health workers are less friendly.

With these problems, a research was conducted on the analysis service of quality to patient satisfaction using the Servperf and Importance Performance Analysis methods at Community Health Center X in the hope of improving the quality of service of community health center X.

Service Performance is the performance of services received or felt by patients and patients assess quality based on the services they have actually experienced [8]. This servperf method can be also be said to be a refinement of the servqual method [9]. The techniques used the Service Performance method using five quality dimensions to evaluate service of quality [10]. The Service Performance method aims to determine the performance of health services on patients. Meanwhile, the IPA or Importance Performance Analysis method is useful for evaluating the level of conformity between the level of performance and the level of importance felt by patients and comparing service performance with desired satisfaction [11], [12]. By using the Importance Performance Analysis method, it is easier to determine the priority scale so that service providers know the dimensions and attributes that are include in the main priority of improvement in order to improve the quality of health center services to patient's satisfaction [13], [14].

B. Research Method

Identification and Operational of Variables

In conducting a study, it is necessary to identify its variables. The dependent variable in this research is quality of service at Community Health Center X on patient satisfaction. While the independent variables used include several attributes in the dimensions of quality in a service at Community Health Center X.

Data Collection Methods

In this research, data collection was carried out by distributing questionnaires to outpatients of Community Health Center X on the level of performance and perceived importance. The population used was outpatients of the Community Health Center X in March 2024 and determining the number of samples can use the Slovin formula [15] and a sample of 100 people was obtained.

C. Result and Discussion

Data Collection

In this research, the data collection stage includes attributes in the five dimensions of service quality measurement.

Table 1. Service Quality Measurement Attributes

Quality Dimentions	Attribute	Statement
<i>Tangibles</i>	X ₁	Availability of a large, safe, and organized parking lot
	X ₂	Attractive, neat, and clean health center environment
	X ₃	Availability of comfortable and adequate waiting and seating areas
	X ₄	The medical equipment used by the health center is adequate
	X ₅	Availability of ambulances at Community Health Center
	X ₆	Availability of patient complaint and suggestion box
	X ₇	Health workers are well-groomed
<i>Reliability</i>	X ₈	Medical personnel provide diagnoses of diseases and take appropriate treatment measures
	X ₉	Health center staff and medical personnel provide services according to the needs of patients
	X ₁₀	Patients service times that are in accordance with the shedule provided by the Community Health Center
	X ₁₁	Fast, precise, and detailed health center adminstration fee services
	x ₁₂	Medical personnel who are fast and professional in conducting examinations
	X ₁₃	Medical personnel are thorough in conducting examinations to patients
<i>Responsiveness</i>	X ₁₄	Medical personnel and staff who are always ready when needed
	X ₁₅	Responsivess in medicine service
	X ₁₆	Easy and fast Community Health Center service procedures
	X ₁₇	Medical personnel are responsive in providing the latest information to patients in a precise, clear, and easy-to-understand manner
	X ₁₈	Health workers are quick in dealing with damage to medical equipment
	X ₁₉	Medical personnel try to help solve problems faced by patients

Quality Dimentions	Attribute	Statement
<i>Assurance</i>	X ₂₀	Assurance of ease in contacting and meeting medical personnel and staff
	X ₂₁	Security assurance with security guards at the health center
	X ₂₂	Guaranteed ease of obtaining health services
	X ₂₃	Guaranteed treatment according to the patient's disease complaints
<i>Empathy</i>	X ₂₄	Guarantee of a good image of the health center
	X ₂₅	Staff and medical personnel are friendly and polite to patients
	X ₂₆	Staff and medical personnel provide attention and services to all patients equally and fairly
	X ₂₇	Staff and medical personnel always communicate well and motivate patients to recover quickly
	X ₂₈	Staff and medical personnel always ask about the patient's needs

Data Processing

At the data processing stage, it is carried out using the Servperf and Importance Perfomance Analysis methods to determine the quality of service to outpatient at Community Health Center X.

1. Data Sufficiency Test

With a sample size of 100 respondents obtained from calculations using the Slovin formula, to find out whether the number of data samples taken is sufficient, the data sufficiency test can be applied. Bernoulli's formula can be used to conduct a data sufficiency test with a research confidence level of 95% and a standard error (Z) of 1,96 so that the results obtained N' were 73 respondents. Because $N' \leq N$, the data sample size is sufficient and validity and reliability test can be carried out [16].

2. Validity Test

The validity test is used on all attributes of the service quality dimension with a total of 100 respondents and $\alpha = 5\%$, then based on the table r product moment obtained R_{table} of 0,195. According to the validity test results of the table above on the performance and importance level, it can be seen that all performance and importance data attributes obtain valid results because they have a value of $R_{count} \geq R_{table}$ with $R_{count} \geq 0,195$.

3. Reliability Test

The reliability test is used to test the accuracy of the questionnaire measurement results and ensure that the data used is correct.

Table 2. Reliability Test of Performance Level

		N	%
Cases	Valid	100	100.0
	Excluded ^a	0	.0
	Total	100	100.0

Cronbach's Alpha	N of Items
.868	28

Table 3. Reliability Test of Importance Level

		N	%
Cases	Valid	100	100.0
	Excluded ^a	0	.0
	Total	100	100.0

Cronbach's Alpha	N of Items
.928	28

Based on the reliability test carried out the performance and importance levels with a total of 100 respondents and a total of 28 attributes, the value of Cronbach alpha $\geq 0,6$ or value of Cronbach alpha $\geq R_{table}$, which means that the data is reliable or consistent. Then the data can be processed using Servperf and Importance Performance Analysis (IPA) methods to determine quality of service.

4. Service Performance

Processing questionnaire data with the Servperf method, namely in the form of performance level data and the level of importance for each attribute in the quality dimension. While for service performance assesment is divided into five interval values as in the following table.

Table 4. Performance Satisfaction Level Assesment

Number	Interval Value or Score	Performance Assesment
1	1,00 – <1,80	Dissatisfied
2	1,80 – <2,60	Less satisfied
3	2,60 – <3,40	Quite satisfied
4	3,40 – <4,20	Satisfied
5	4,20 – 5,00	Very Satisfied

Table 5. Case Processing Summary Performance Level

Attribute	Mean Performance	Mean Importance	Suitability Level
X ₁	3,32	4,2	79,05%
X ₂	3,7	4,35	85,06%
X ₃	3,25	4,32	75,23%
X ₄	3,38	4,47	75,62%
X ₅	3,67	4,35	84,37%
X ₆	3,26	4,22	77,25%
X ₇	3,85	4,3	89,53%
X ₈	3,35	4,5	74,44%
X ₉	3,48	4,47	77,85%
X ₁₀	3,34	4,36	76,61%
X ₁₁	3,81	4,33	87,99%
X ₁₂	3,4	4,42	76,92%
X ₁₃	3,1	4,57	67,83%
X ₁₄	3,57	4,59	77,78%
X ₁₅	3,24	4,51	71,84%
X ₁₆	3,28	4,29	76,46%
X ₁₇	3,22	4,3	74,88%
X ₁₈	3,35	4,33	77,37%
X ₁₉	3,44	4,26	80,75%
X ₂₀	3,25	4,52	71,90%

Attribute	Mean Performance	Mean Importance	Suitability Level
X ₂₁	3,13	4,34	72,12%
X ₂₂	3,45	4,26	80,99%
X ₂₃	3,2	4,41	72,56%
X ₂₄	3,37	4,31	78,19%
X ₂₅	3,28	4,53	72,41%
X ₂₆	3,41	4,45	76,63%
X ₂₇	3,43	4,42	77,60%
X ₂₈	3,49	4,33	80,60%
Mean	3,39	4,38	77,49%

Based on the application of the Service Performance method, the mean value of each attribute is calculated for the level of performance and importance is carried out. The average performance value of all attributes is 3,39 so that it can be said their patients are quite satisfied with the performance of the services provided by the Community Health Center X. As for the level importance, the average importance of all attributes is 4,38 which means that on average all attributes are considered very important by patients. Meanwhile, at the level of conformity between of importance and performance levels, the mean level of conformity is 77,49%. Because the average level of conformity is less than 100%, improvements need to be made to improve the quality of healthcare service to patients.

5. Importance Performance Analysis (IPA)

The application of the IPA method aims to find out which attributes are included in the main priority of improvement based on the results of attribute mapping.

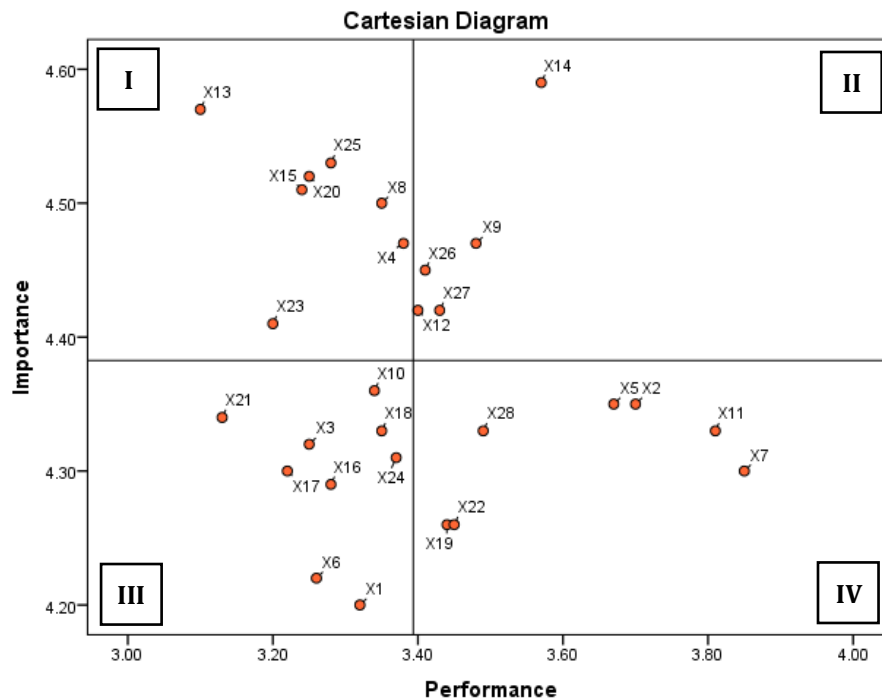


Figure 1. Importance Performance Analysis Diagram

Based on the picture above, there are details of the attribute position from the Importance Performance Analysis mapping results.

Table 6. Results and Mapping Attributes of Importance Performance Analysis
Quadrant Attributes

Quadrant	Attributes	Statement
Quadrant I (High Importance – Low Performance)	X ₄	The medical equipment used by the health center is adequate
	X ₈	Medical personnel provide diagnoses of diseases and take appropriate treatment measures
	X ₁₃	Medical personnel are thorough in conducting examinations to patients
	X ₁₅	Responsiveness in medicine service
	X ₂₀	Assurance of ease in contacting and meeting medical personnel and staff
	X ₂₃	Guaranteed treatment according to the patient's disease complaints
Quadrant II (High Importance – High Performance)	X ₂₅	Staff and medical personnel are friendly and polite to patients
	X ₉	Health center staff and medical personnel provide services according to the needs of patients
	X ₁₄	Medical personnel and staff who are always ready when needed
	X ₁₂	Medical personnel who are fast and professional in conducting examinations
	X ₂₆	Staff and medical personnel provide attention and services to all patients equally and fairly
Quadrant III (Low Importance – Low Performance)	X ₂₇	Staff and medical personnel always communicate well and motivate patients to recover quickly
	X ₁	Availability of a large, safe, and organized parking lot
	X ₃	Availability of comfortable and adequate waiting and seating areas
	X ₆	Availability of patient complaint and suggestion box
	X ₁₀	Patients service times that are in accordance with the schedule provided by the Community Health Center
	X ₁₆	Easy and fast Community Health Center service procedures
	X ₁₇	Medical personnel are responsive in providing the latest information to patients in a precise, clear, and easy-to-understand manner
	X ₁₈	Health workers are quick in dealing with damage to medical equipment
Quadrant IV (Low Importance – High Performance)	X ₂₁	Security assurance with security guards at the health center
	X ₂₄	Guarantee of a good image of the health center
	X ₂	Attractive, neat, and clean health center environment
	X ₅	Availability of ambulances at Community Health Center
	X ₇	Health workers are well-groomed
	X ₁₁	Fast, precise, and detailed health center administration fee services
	X ₁₉	Medical personnel try to help solve problems faced by patients
	X ₂₂	Guaranteed ease of obtaining health services
	X ₂₈	Staff and medical personnel always ask about the patient's needs

6. Proposed Improvements

According to the results of data processing that has been carried out using Service Performance and Importance Performance Analysis, the authors can provide suggestions for improvements related to attributes that are included in the main priority to be repaired and improved.

Table 7. Proposed Improvement

Attributes	Statement	Proposed Improvement
X ₄	The medical equipment used by the health center is adequate	<ul style="list-style-type: none"> - Health workers conduct regular monitoring or checking related to inventory or supply of medical devices so that they are always available if needed. - Conduct periodic reviews of the medical equipment used and consider adding or updating medical equipment with the latest version.
X ₈	Medical personnel provide diagnoses of diseases and take appropriate treatment measures	<ul style="list-style-type: none"> - Medical personnel conduct periodic checks on patients by providing attention and input if they are still not recovering, they can return again for further examination or referral action.
X ₁₃	Medical personnel are thorough in conducting examinations to patients	<ul style="list-style-type: none"> - The health center should clarify the SOP in examining patients, provide understanding to employees and medical personnel to implement the SOP properly, and can also provide supervision for future evaluation
X ₁₅	Responsiveness in medicine service	<ul style="list-style-type: none"> - Adding health workers or pharmacist in providing medicine services and always monitoring medicine supplies. - Write down information related to the use of medicine completely and clearly such as the dose of use, how many times a day, after or before meals, and whether it must be used up or until it is cured.
X ₂₀	Assurance of ease in contacting and meeting medical personnel and staff	<ul style="list-style-type: none"> - The health center provides a customer service that can be contacted online to make it easier for patients to ask question regarding the availability of doctors related to the services needed.
X ₂₃	Guaranteed treatment according to the patient's disease complaints	<ul style="list-style-type: none"> - The health center provides one officer in the medicine service to always reconfirm the complaints felt by patients when they want to hand over the medicine. - Health workers or medical personnel provide referral action if the patient requires more action, but the Community Health Center is not able to handle it.
X ₂₅	Staff and medical personnel are friendly and polite to patients	<ul style="list-style-type: none"> - The health center provides ethical standards by implementing 4S (Greeting, Smile, Accost, and build friendship)

D. Conclusion

The quality of service at Community Health Center X shows that patients are quite satisfied with the performance of the services provided, this is based on the average value of service performance with a value of 3,39. Meanwhile, based on the level of conformity between performance and importance, a percentage of 77,49% is obtained, which shows that the suitability is less than 100% so that improvements need to be made to improve service quality. Then the proposed improvements to improve service quality at Community Health Center X on attribute X₄ are monitoring of medical device inventory and reviewing medical devices in use and considering updating medical devices with the latest version. Attribute X₈ is to

conduct regular checks on patients and take referral action if needed. At attribute X_{13} is to clarify the SOP in conducting examinations to patients and providing supervision for future evaluation. At attribute X_{15} by adding health workers or pharmacists in pharmaceutical services and writing information related to the use of medicines clearly and completely. At attribute X_{15} by providing customer service that can be contacted via online. At attribute X_{20} by confirming again related to complaints felt by patients when they are about to hand over the medicine and provide referrals if the patient needs more action, but the health center has not been able to analyze the patient's complaints. Then attribute X_{25} by providing ethical standards by implementing 4S.

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