ISSN 2087-3336 (Print) | 2721-4729 (Online)

TEKNOSAINS: Jurnal Sains, Teknologi dan Informatika Vol. 11, No. 2, July 2024, page. 365-372 http://jurnal.sttmcileungsi.ac.id/index.php/tekno DOI: 10.37373

Evaluation of the Muara Satu Community Health Center in Lhokseumawe City's outpatient services' quality utilizing the importance-performance analysis approach and possible increase in customer value

Meilinda Dhika Putri, Bakhtiar*, Amri

*Industrial Engineering, Faculty of Engineering, Malikussaleh University, Lhokseumawe City, Indonesia

*⊠ bakhtiar@unimal.ac.id

Submitted: 27/03/2024

Revised: 20/05/2024

Accepted: 31/05/2024

ABSTRACT

A dynamic state of people, processes, environments, goods, and services that either meet or beyond expectations is known as service quality. It is vital to improve services to compete and provide higher-quality services at the Muara Satu Community Health Center through initiatives to enhance human resources and ongoing performance improvement. The Muara Satu Community Health Center has received major accreditation for its services; however, as of yet, no reassessment has been conducted. The management of Puskesmas wishes to refine the accreditation to become plenary so that patient satisfaction can serve as a gauge of the success of the center's health services provided to the community. This study aims to evaluate the degree of agreement between patient interests and satisfaction and the Muara Satu Community Health Center's service quality performance. Additionally, it seeks to identify the attributes that should be given priority for service improvement through the application of the Potential Gain in Customer Value (PGCV) method. Patients' complaints regarding services, such as uncomfortable waiting rooms and a lack of information about the ailments they were suffering from, posed a challenge for this study. Five categories were created based on 17 characteristics of the patient requests made at the health center and were given to 58 pre-selected samples. This category includes Assurance, Empathy, Tangible, Reliability, and Responsive. The Muara Satu Health Center is required to implement seven priority orders for quality improvement based on the IPA and PGCV methods, based on data processing findings. These orders include requiring the Community Health Center staff to inform patients before providing services, having a comfortable waiting area, and having officers act quickly and appropriately when necessary. Facilities in Puskesmas are fully equipped. The types of ailments, their treatments, and how to take medication are all thoroughly explained by the doctor. Furthermore, physicians allot enough time for patient examinations.

Keywords: Importance performance analysis (IPA); service quality; potential gain in customer value (PGCV)

1. INTRODUCTION

Prior research using the Importance of Performance Analysis and Potential Gain in Customer Value techniques was done on service quality-related concerns before this study was carried out. The Tanjung Palas Community Health Center in North Kalimantan served as the site of this study. Non-probability sampling was used for the sampling process, and 99 outpatient respondents were included in the sample. According to research findings from the outpatient satisfaction index using the Importance Performance Analysis (IPA) method, patients' level of satisfaction with the services they receive is significantly influenced by the quality of care they receive. This is demonstrated by the community health center's performance, which falls short of their expectations and leaves them less satisfied with the center's offerings. particularly in quadrant I qualities, which include the medical facility's cleanliness, the availability of all necessary equipment, and the dependability of the staff, which includes both doctors and nurses [1].



TEKNOSAINS: Jurnal Sains, Teknologi dan Informatika is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License. **ISSN** 2087-3336 (Print) | 2721-4729 (Online)

Evaluation of the Muara Satu Community Health Center in Lhokseumawe City's outpatient services' quality utilizing the importance performance analysis approach and possible increase in customer value

A government agency called Puskesmas assists citizens in obtaining medical care to raise service standards [2]. The community's needs, wants, and expectations can all be simultaneously satisfied by the services provided. To offer services, a plan must be prepared in compliance with industry requirements, which include tangible evidence, dependability, responsiveness, assurance, and empathy [3]. A measurement technique that can gauge the level of service quality is required to evaluate service quality. The technical model for importance-performance analysis was first developed by Maertila and James. Often referred to as "quadrant analysis," this approach looks at customer perceptions in an attempt to raise the caliber of products and services [4].

Based on the results of the work assessment and the interest assessment, the degree of alignment between interests and implementation level will be calculated. Furthermore, it is expected that the potential gain customer value (PGCV) technique will provide insights into the quality that requires enhancement to meet patient expectations. PGCV is an additional method to the IPA methodology for analyzing the attributes that are being studied. The outcomes of these two methods for determining the attributes that require improvement are obtained by computing the degree of conformance and the Cartesian diagram. Sorts qualities with room for improvement and displays PGCV values [5],[6]. According to this study, one of the Muara Satu Community Health Centers in Lhokseumawe City's health sector development initiatives is offering high-quality medical care.

Nevertheless, the Muara Satu Community Health Center, which is mainly accredited, has not had its services reevaluated as of yet. The Muara Satu Community Health Center's management, however, plans to finish the certification process until it is finished. A patient will feel content if they receive better care than they anticipated, but this won't produce the optimal outcomes. According to data provided by the Muara Satu Community Health Center for January through September of 2022, patients complained about a variety of services, including inadequate patient education, a lack of explanation for the patient's condition, poor response from officers in the general polyclinic, and officers who did not wear uniforms. Administrative services take longer than twenty minutes, the pharmacy's waiting area is uncomfortable, and the restrooms are dirty by the set schedule.

The aforementioned issues make it challenging for community service protocols to operate effectively. This study's objectives are to evaluate the Muara Satu Community Health Center's patient services in light of performance standards and expectations, as well as to pinpoint areas in need of improvement utilizing the IPA and PGCV methodologies.

2. METHOD

It can be challenging to distinguish between products and services since goods are frequently acquired in conjunction with certain services, and vice versa. Additionally, the acquisition of a service is frequently linked to the purchase of other goods. A service is any intangible action or behavior that can be performed by a third party and does not result in financial benefit [7].

Any action performed by one or more parties about third parties guarantees their satisfaction with the goods and services obtained is considered a service. Service demonstrates the bond and reciprocal need between two elements or groups. Consequently, each element's responsibilities and functions are distinct [8]. The following traits can be observed in good service[9]: 1) In charge of every customer or guest from beginning to end. 2) Capable of offering precise and prompt service. 3) Capable of communicating. 4) Capable of ensuring that each transaction remains private. 5) Possess crucial knowledge and abilities. 6) Make an effort to comprehend what clients or guests need. 7) Win over customers' or visitors' trust.

Service quality

Goetsh and Davis define quality as a dynamic state involving a range of components that meet or beyond expectations, such as people, processes, products, and the environment. Based on the aforementioned reasoning, it can be concluded that service quality is achieved by striking a balance between adequate delivery and control while giving the needs, goals, and desires of the client top priority [10]. Enhancing quality involves several crucial components, which are as follows [11]: 1) Serving consumers should be an organization's top priority. An organization's ability to continue operating depends heavily on its service customers. 2) Clients that consistently utilize the same service provider are referred to as dependable service users. They are regarded as the service's devoted customers. Ensuring the satisfaction of consumers is crucial since they increase the likelihood of repeat business from businesses when they are pleased with the quality of the goods or services they receive. 3) To guarantee service users' satisfaction, we must manufacture high-quality goods. Quality needs to be updated constantly to retain consumer satisfaction and loyalty because it affects advancement and sustainability.

Dimensions of service quality

The ability of the service sector to deliver high-quality services is influenced by five key aspects, including [12]: 1) Tangibles: the company's capacity to verify its presence to internal stakeholders, as well as the facilities, equipment, and setting in which it conducts business as a service provider. 2) Reliability: To deliver services that live up to client expectations, the business needs to be able to deliver on its promises of accuracy and dependability. 3) Reactivity, or the capacity to assist customers and provide prompt, efficient legal services together with open lines of communication. 4) Assurance, or the capacity of a company's clientele to foster a greater sense of confidence in the business that offers their services. 5) Empathy, or the practice of paying close attention to clients and making an effort to comprehend their needs.

Importance performance analysis (IPA) method

The Importance performance analysis method can be used to examine the quality of services. It is applicable in several fields due to its ease of use, easily comprehensible display of analysis results, and facilitation of the process of obtaining recommendations for performance enhancements. Because it has a mutually beneficial relationship to produce a detailed value for the level of consumer satisfaction by displaying which attributes need to be improved or reduced and prioritizing those attributes, using this method is also helpful for measuring the level of consumer satisfaction [13].

Performance analysis originated from the concept of service quality, or Servqual, given its significance. This concept translates what customers want into what businesses need to accomplish to deliver excellent tangible and intangible goods [14].

According to this method, the two factors that define customer delight are significantly influenced by expectations and perceived performance. Customers expect the desired commodity, hence they have expectations. A person's needs, prior experiences, suggestions from others, and advertising all have an impact on these expectations. Perceived performance is the evaluation that customers give a product's look and usability [15].

Performance analysis is crucial for comparing expectations with perceived performance (business performance) because it assesses a company's capacity to satisfy clients. As a result, X and Y stand for two different things: X is the performance level of the firm that can lead to customer pleasure, while Y is the amount of interest from customers. Each factor that affects client happiness is made simpler with:

1. Level of Conformity: Research findings on importance and satisfaction level can be used to determine the amount of appropriateness. A measure of conformance is obtained by comparing the quantities of significant values. This degree of appropriateness will be used to identify the attributes that require improvement [16]. Assess the level of conformity.

$$Tk_{i} = \frac{\Sigma X_{i}}{\Sigma Y_{i}}$$
(1)

2. Cartesian Diagram: A Cartesian diagram, which is a chart with four equal portions, shows the average of all elements or degrees of relevance of quality and level of implementation in connection to customer satisfaction. Two intersecting lines that are perpendicular to the points (\bar{X}, \bar{Y}) delineate the boundaries of each segment. \bar{X} denotes the average of all components or the attribute importance level, while \bar{Y} represents the implementation level in terms of customer satisfaction [17].

$$X \frac{\sum_{i=1}^{n} X_{i}}{K} \text{ and } Y \frac{\sum_{i=1}^{n} Y_{i}}{K}$$
(2)

Potential gain customer value (PGCV) Method

With this method, significance and performance analysis results are finished. The goal of this tool is to prioritize the necessary upgrades. Analysis of performance and importance rarely recommends improvements that should be prioritized highly. A more thorough and rigorous quantitative

Evaluation of the Muara Satu Community Health Center in Lhokseumawe City's outpatient services' quality utilizing the importance performance analysis approach and possible increase in customer value

comparison of importance and performance is possible [18]. The PGCV index has the following steps [18]:

1. Achieve Customer Value (ACV)

$$ACV = \overline{X} \times \overline{Y} \tag{3}$$

2. Ultimately Desire Customer Value (UDCV)

$$DUDCV = \overline{Y} \times \overline{X} \max$$
(4)

3. Index PGCV

$$Indeks PGCV = UDCV - ACV$$
(5)

Instrument testing techniques

Validity Test: The degree to which an instrument can faithfully depict the primary subject of measurement using the instrument is known as its validity [19]. If the questions on a questionnaire can yield information that will be utilized in the evaluation, then it is deemed valid. In this investigation, the Pearson Product Moment correlation test was employed. To ascertain whether each attribute has disclosed the elements that require further investigation, attribute difference analysis is employed. The correlation formula for the Pearson product-moment is:

$$\frac{N(\Sigma X.Y) - (\Sigma X.\Sigma Y)}{\sqrt{[N.\Sigma X^2 - (\Sigma X^2)] x[N.\Sigma Y^2 - (\Sigma Y)^2]}}$$
(6)

Test for Reliability: A reliability test determines how well a measuring tool (instrument) can demonstrate the stability of observational results when measured with that tool under constant conditions, meaning that no changes occur during measurement. The purpose of this test is to assess how consistently respondents have answered each question [19]. When the questionnaire is distributed repeatedly to different respondents and the findings show little variation from the responses of respondents overall, the questionnaire's quality can be trusted. Method of analysis The Cronbach Alpha reliability test approach is used in this study's reliability test. Formula for Reliability Test Calculation:

$$\mathbf{r}_{Cronbach\,Alpha} \frac{M}{M-1} \left(1 \frac{JKx}{JKy} \right) \tag{7}$$

Likert scale

A person or group's attitudes, points of view, and perceptions surrounding educational symptoms or events can be evaluated using the Likert scale [19]. The Likert scale is a psychometric instrument that is frequently used in surveys.

Population and sample

Customers were given questionnaires to complete to conduct a survey and get data on patient expectations and performance levels. There were 136 populations in this study; the sample will be reduced by applying the Slovin method to calculate the population.

$$n = \frac{N}{1 + N(e)^2} \tag{8}$$

Where : n= Sample size/number of respondents N= Population size e= Accuracy allowance percentage = 10 % Based on sample calculations, there were 58 respondents in this study.

Research stages

a. Validity test

b. Reliability test data

- c. Importance performance analysis (IPA) Analysis
 - Determine the level of suitability of the respondent.
 - Determine the average score for performance level and level of importance.
 - Determine the average of the average performance level scores for all attributes and the average of the importance level scores of all factors that influence customer satisfaction.
 - Make a Cartesian diagram of these attributes into four parts.
- d. Potential gain in customer value (PGCV) Analysis
 - Achieve Customer Value (ACV)
 - Ultimately Desire Customer Value (UDCV)
 - PGCV Index

3. RESULTS AND DISCUSSION

Results

Characteristics of respondents based on the distribution of questionnaires totaling 58 respondents, a confidence level of 90%, and an error rate of 10% can be seen in Table 1.

Table 1. Characteristics of respondents					
No	Respondent Profile	Description	Total		
1	Candan	Man	23		
	Gender	Woman	35		
		17-30 Years	19		
2	Age	31-50 Years	26		
		51-80 Years	13		

Validity Test: The results of the validity test's recapitulation of the respondent's questionnaire demonstrate the validity of each of the questionnaire's characteristics, as indicated by the r table value of 0.2586. Calculations indicate that all features are valid because the overall determined r value of the Pearson correlation is greater than the r table.

Reliability Test: When computing reliability tests for decision-making performance and expectation levels, a 0.6 threshold is applied. If the Cronbach Alpha value is more than 0.6, it is reliable. Because the expectation level is 0.758 and the performance level reliability test results are 0.806, suggesting a Cronbach alpha value >0.6, it is regarded as reliable.

Importance performance analysis (IPA): The computations make use of predicted and average performance levels. A value of 1.39 for the level of expectations on the (Y) axis and 0.93 for the performance level on the (X) axis was used to construct the importance-performance analysis (IPA) diagram. utilized in the creation of the importance-performance analysis (IPA) diagram depicted in Figure 1.



Figure 1. Cartesian diagram

Analysis of potential gain in customer value (PGCV): Table 2 displays the PGCV index's overall calculation results.

Evaluation of the Muara Satu Community Health Center in Lhokseumawe City's outpatient services' quality utilizing the importance performance analysis approach and possible increase in customer value

No	Attribute	Performance	Expectation	Value	Value	Index
		Level (" \overline{X} ")	Level (\overline{Y})	ACV	UDCV	PGCV
1	X1	3,10	4,71	14,61	23,53	8,93
2	X2	2,81	4,76	13,37	23,79	10,42
3	X3	2,93	4,83	14,15	24,14	9,99
4	X4	3,19	4,81	15,34	24,05	8,71
5	X5	2,93	4,71	13,80	23,53	9,74
6	X6	2,95	4,76	14,03	23,79	9,76
7	X7	3,07	4,83	14,82	24,14	9,32
8	X8	3,07	4,79	14,71	23,97	9,26
9	X9	3,05	4,71	14,36	23,53	9,17
10	X10	3,03	4,79	14,54	23,97	9,42
11	X11	3,05	4,57	13,94	22,84	8,90
12	X12	3,03	4,74	14,39	23,71	9,32
13	X13	3,95	4,78	18,86	23,88	5,02
14	X14	2,97	4,69	13,91	23,45	9,54
15	X15	3,03	4,79	14,54	23,97	9,42
16	X16	4,21	4,79	20,16	23,97	3,80
17	X17	3,71	4,71	17,45	23,53	6,09

Table 2. PGCV index calculation results

The community health center's (X2) feature of having a comfortable waiting room (PGCV index value of 10.42) is identified as the greatest priority that needs to be improved in Table 2, which displays the results of the PGCV index calculation. Conversely, the attribute with the lowest index value—that of physicians listening to patients' concerns and offering solutions during consultations (X16)—has the lowest index value (3.80), indicating that no changes are necessary for this attribute; instead, the Community Health Center must continue to provide the service.

Discussion

As per the cartesian diagram concept, the features in quadrant I based on the PGCV calculation are the focus of improvement, as indicated by the Table 3 priority ranking.

Attribute	Question	Value ACV	Value UDCV	Index PGCV
X2	The health center has a comfortable waiting room	13,37	23,79	10,42
X3	The health center has complete equipment	14,15	24,14	9,99
X6	Staff help if there are patient problems	14,03	23,79	9,76
X10	Officers took action quickly and precisely	14,54	23,97	9,42
X15	Doctors give patients sufficient examination time	14,54	23,97	9,42
X7	The doctor tells you the complete type of disease, how to treat it, and how to take medication	14,82	24,14	9,32
X8	Staff provide information to patients before services are provided	14,71	23,97	9,26

Table 3. Priority order for improving quadrant I attributes based on PGCV calculations

Making changes is of utmost importance, as Table 3 demonstrates that the health center's comfortable waiting room feature (X2) has the highest PGCV index value. By selecting features that have the greatest potential to improve the community health center, the PGCV index is used to rank features in order of priority for service development [20].

Seven characteristics were determined by calculating the PGCV index value, and these still showed a disconnect between the patient's expectations and reality [13]. The idea of quality improvement recommendations to improve services for each characteristic is as follows. These are the starting solutions to solving the problem, based on the expectations of the patient from these seven attributes:

- a. The Puskesmas has a cozy waiting area (X2). It is ideal for the Puskesmas to have a cozy waiting area to minimize patient wait times and increase patient satisfaction with the Puskesmas services.
- b. The Puskesmas has complete equipment (X3). It is ideal if the Puskesmas has all the necessary medical equipment so that those in need of care are happy with the facility's level of medical equipment.
- c. Employee assistance for patients to feel content with the services received, and the Community Health Center assists patients if an issue arises (X6).
- d. The patient will receive comprehensive information from the doctor about the type of disease they are suffering from, how to treat it, and how to take medication (X7). This will help the patient understand the condition they are suffering from and take steps to prevent it from happening in the future. Stay away from this illness.
- e. The patient receives information from the officer before the service is rendered (X8); this is preferable since it prevents the patient.
- f. Officers act promptly and accurately (X10): Tto from being misled provide patients with highquality care and ensure that they are satisfied, it is ideal for officers to act promptly and precisely when responding to patients in need.
- g. The physician allows enough time for the patient's examination (X15); the physician should take take their time and thoroughly assess the patient's condition to ensure that the patient is happy with the Puskesmas' services.

4. CONCLUSION

Regardless of how much they value and are pleased with the Puskesmas service offering, patients feel that the satisfaction they receive from the performance is much below what they expected. This is evident from the service quality, which falls well short of their expectations. This is evident in the level of service provided, which falls short of patients' expectations and makes them unhappy with the care they receive at the Muara Satu Community Health Center in Lhokseumawe City. It is commonly known that the same outcomes are obtained when comparing the levels of conformance in Importance Performance Analysis (IPA) and the priority order of service improvements based on the level of conformity and potential increase in customer value, known as Potential Gain in Customer Value (PGCV). As a quadrant I have a poor quality performance level but a high significance value, raising the bar for Community Health Center services is the primary goal. With an index value of 10.42, the property located in quadrant I is a cozy Puskesmas waiting room (X2). The Puskesmas receives an index score of 9.99 and has full equipment (X3). When a patient has challenges, staff members assist them (X6) with an index value of 9.76. The doctor provides explanations on all disease kinds, treatment modalities, and medicine administration techniques (X7), with an index score of 9.32. Before services are rendered, officers tell patients (X8), with an index value of 9.26. Officers with an index score of 9.42 were those who responded promptly and accurately (X10). Additionally, the physician allows the patient adequate time to complete the examination (X15), which has an index value of 9.42.

ACKNOWLEDGMENT

Thank you to the Muara Satu Community Health Center, Lhokseumawe City, which has allowed the author to carry out research until completion.

REFERENCES

[1] Ashalia Alretha and Vinna Amalia Resi Damayanti, "Pengaruh kualitas pelayanan terhadap minat kunjungan ulang pada poliklinik jantung Rumah Sakit Islam Sakinah Mojokerto,"

Evaluation of the Muara Satu Community Health Center in Lhokseumawe City's outpatient services' quality utilizing the importance performance analysis approach and possible increase in customer value

BEMAS J. Bermasyarakat, vol. 4, no. 2, pp. 333-341, 2024, doi: 10.37373/bemas.v4i2.838.

- [2] E. D. Noorratri and T. Susilowati, "Optimalisasi pemberian penyuluhan kesehatan dan pelatihan senam DM pada kader posyandu lansia melati arum RW X Kentingan Surakarta," *BEMAS J. Bermasyarakat*, vol. 4, no. 1, pp. 102–109, 2023, doi: 10.37373/bemas.v4i1.595.
- [3] Ratminto, Manajemen Pelayanan. Yogyakarta: Pustaka Pelajar, 2006.
- [4] J. A. Martilla and J. C. James, "Importance-performance analysis," 1986.
- [5] A. Darmawan, M. Mulyadi, and N. K. Busri, "Analisis Kepuasan Pelanggan Terhadap Layanan Purna Jual Avanza dengan Metode Servqual dan PGCV (Studi Kasus BPPT Hadji Kalla Cabang Urip Makassar)," J. Eng. Manag. Ind. Syst., vol. 2, no. 2, 2014.
- [6] D. W. Ariani, *Manajemen kualitas : pendekatan sisi kualitatif*. Ghalia Indonesia, jakarta, 2003.
- [7] P. Kotler, Manajemen Pemasaran. Jakarta: Rineka Cipta, 2000.
- [8] F. Tjiptono, *Pemasaran Strategik*, Edisi 2. Yogyakarta: Andi Offset, 2012.
- [9] Kasmir, Manajemen Perbankan. Jakarta: PT Raja Grafindo Persada, 2006.
- [10] F. Tjiptono, *Manajemen Jasa*. Yogyakarta: Andi Offset Majalah Info Bisnis, 2002.
- [11] F. Tjiptono, Manajemen Jasa. Jakarta: PT Rineka Cipta, 1996.
- [12] Sunarto, Perilaku Konsumen. Yogyakarta: AMUS Jogjakarta dan CV. Ngeksindo Utama, 2003.
- [13] M. A. S. Anas and Intan Sofiya, "Analisis dan perancangan sistem informasi pengolahan data rekam medis berbasis WEB di puskesmas XYZ," *INFOTECH J. Inform. Teknol.*, vol. 3, no. 2, pp. 82–91, 2022, doi: 10.37373/infotech.v3i2.350.
- [14] Supranto, "Pengukuran Tingkat Kepuasan Pelanggan. Untuk Menaikkan Pangsa Pasar," in *Edisi Baru*, 2001.
- [15] I. Muazansyah, I. Sudirman, and others, "Kualitas Pelayanan Rawat Jalan Puskesmas Tanjung Palas Berdasarkan Metode Importance Performance Analysis," JPSI (Journal Public Sect. Innov., vol. 3, no. 2, pp. 75–83, 2019.
- [16] R. Sukwadi and others, "Penentuan Prioritas Perbaikan Kualitas Layanan TransJakarta dengan Menggunakan Metode IPA-PGCV," J. Rekayasa Sist. Ind., vol. 4, no. 2, pp. 64–69, 2015.
- [17] S. J, Pengukuran Tingkat Kepuasan Pelanggan Untuk Menaikkan Pangsa Pasar. Jakarta: PT Rineka Cipta, 2001.
- [18] H. Rosyidah, T. Wuryandari, and A. Rusgiyono, "Analisis Kualitas Pelayanan Dengan Menggunakan Fuzzy Servqual, Kuadran IPA, Dan Indeks Pgev," J. Gaussian, vol. 4, no. 4, pp. 885–894, 2015.
- [19] H. S, Analisis Butiran Instrumen Angket, Tes dan Nilai Skala dengan Basica. Yogyakarta, 1991.
- [20] Mulyana Wiguna and Iskandar, "Sistem Administrasi Data Visum Pada Pendaftaran Instalasi Gawat Darurat di RSUD Cileungsi Berbasis Web Dengan Menggunakan Metode Waterfall," *INFOTECH J. Inform. Teknol.*, vol. 2, no. 2, 2021, doi: 10.37373/infotech.v2i2.181.