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Analysis of Patient Service Quality Using the Importance Performance Analysis Method at The Community Health Centre

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Abstract

Community Health Centres, as primary-level health service units, are responsible for providing a range of services, including health promotion, disease prevention, treatment, and rehabilitation. This study aimed to determine the level of significance and patient satisfaction with the performance of the Community Health Centre's services, as well as the priority of attributes in meeting patient needs for quality of service at the community health centre. We used the Importance Performance Analysis method to identify service attributes considered important by patients and evaluate how well these attributes are implemented. The problem in this study was patient complaints about services, such as in terms of patient examinations, incomplete information to patients, and a lack of complete medicines. The stages of this research include identifying service quality attributes, developing a questionnaire, collecting data, analysing the data, interpreting the results, and making recommendations for service improvements. The results showed 20 attributes found in the needs of community health centre patients, which were manifested in five dimensions of service, namely tangibles, reliability, responsiveness, assurance, and empathy, which were distributed to 71 predetermined samples. Based on the results of data analysis, it was found that there were six primary priority sequences in improving the quality that needed to be carried out by the community health center based on the Importance Performance Analysis method, namely, the pharmacy has a complete collection of drugs, patient experts examine patients seriously, community health center medical personnel provide the required data effectively, officers receive and serve well, Health center officers are always patient in handling patient complaints, officers' readiness to apologize for what happened.

Keywords: *Service Quality, Importance Performance Analysis, Consumer Satisfaction, Community Health Centre.*

1. Introduction

The existence of industry has become an essential part of human evolution. One of the factors that has a significant impact on this is human resources, especially employees. All of these advancements require higher security and health [1]. Companies use activities in today's commercial environment to compete and ensure their achievements at lower costs. Management of activities focuses on effectively managing resources to produce quality products or services [2]. The Community Health Centre is a health service provider that runs public health programs and individual health measures at the first level, emphasising promotive efforts and preventive measures to achieve the highest level of public health [3][4]. The role of the service provider is the key point of success. This means that the government, with a position as an organiser, has provided several health facilities/service providers widely used by the people, one of which is the community health centre [5][6]. Achieving quality and accessible health services requires the implementation of synchronous service efforts where standard work is responsiveness, assurance, reliability, tangible (physical evidence), and empathy [7][8]. Quality means a group of properties and characteristics that determine the results achieved and can accommodate customer needs according to requirements, so customers choose and assess to what extent these properties and characteristics meet their needs [9]–[11].
In providing services to improve quality and be able to compete, through continuous performance improvement and efforts to improve the quality of human resources at the Health Centre, it is necessary to restore the services provided. Service efficiency is centred on efforts to fulfil patient needs and aspirations, and the accuracy of delivery to balance patient expectations. Patient satisfaction is determined by the desired service effectiveness, as a result of which quality is the primary priority for every service industry today [12][13]. So, each post will try to look as good as possible from the perspective of patients or customers, so that they can be encouraged to complete what is needed in the health sector. In providing services to improve quality and be able to compete through continuous performance improvement and efforts to improve the quality of human resources at the Health Centre, it is necessary to restore the

services provided [14][15]. Service efficiency is centred on efforts to fulfil patient needs and aspirations, and the accuracy of delivery to balance patient expectations. Patient satisfaction is determined by the desired service effectiveness, resulting in quality being the primary priority for every service industry today. So, every post will try to look as good as possible from the perspective of patients or customers so that they can be trusted to provide what is needed in the health sector [16]–[18].

Customer service, in general, means any activity intended or aimed at delivering customer satisfaction; through this service, customers' desires and needs can be fulfilled. Initial monitoring of the Health Centre results showed several weaknesses in public health services, especially in the examination of patients, which was still lacking, incomplete information to patients, a lack of complete medicines in pharmacies, and a lack of officers to serve visitors well. These factors hinder the smooth running of the service process for the community.

Service efficiency, namely high-quality products and services, is expected to meet consumer desires. Services will only be accepted if they are what consumers want [19]. As a party that provides services to the community, it is hoped that the health centre can find out or identify the patient's hopes when receiving services so that patients feel satisfied and comfortable seeking treatment at the Health Centre. To radiate service quality, a method is needed that describes the level of service degree using the Importance Performance Analysis (IPA) method, namely a procedure that is useful for choosing policies and practical management arts according to the level of importance and satisfaction of an attribute [20]–[25].

2. Methods

This study was conducted at a community health centre in Aceh, Indonesia. The respondents were patients who had been treated there. Data acquisition in this study was carried out using the technique of obtaining new information used to support research. This study uses primary data generated using observation strategies, questionnaires, and library studies. Figure 1 shows the research stages in this study.

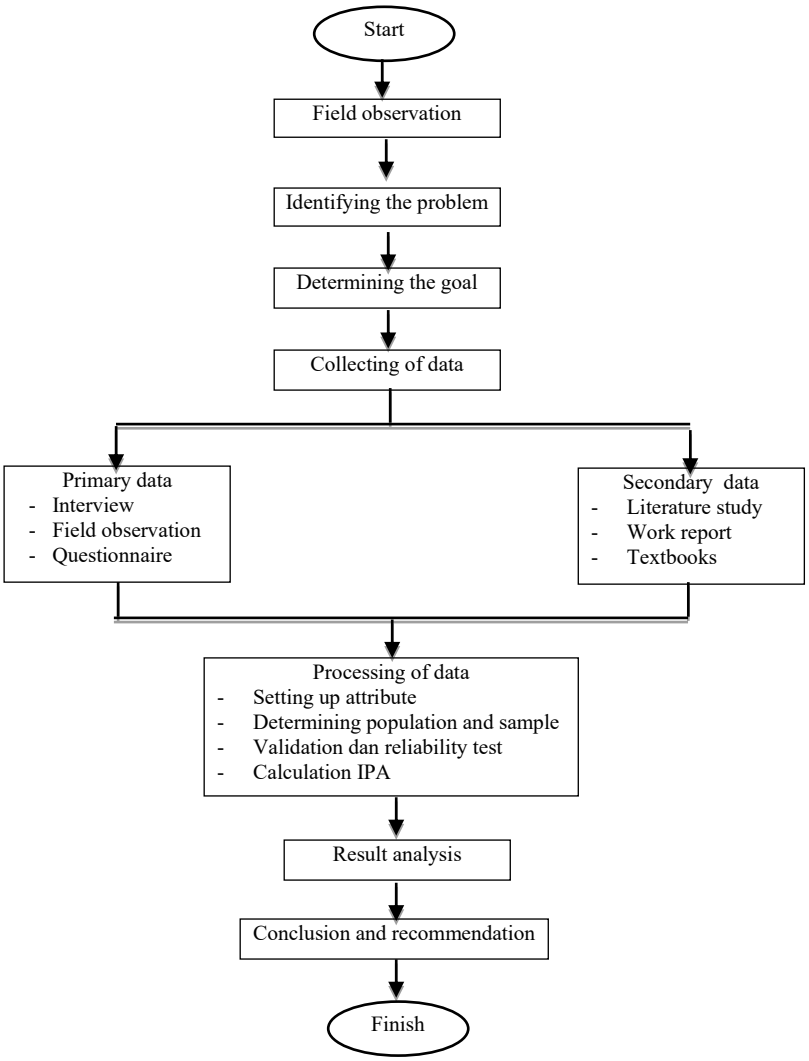

Fig 1. Research Flowchart

2.1. Research Sample

A sample is a group of fractions of the total population and attributes included in the ownership of the population group. Segment collection is done using the sampling method in this study, which means using the Slovin formula. Based on the patients of the Health Centre, the number of outpatient visitors in 2024 can reach 250 visitors in a week, and the error rate (e) is 10%.

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Description:
N = Population = 250 people
e = Error rate (Margin Of Error) = 10% = 0.10
So:
n = 250/(1+(250)(0.10)2)
n = 250/3.5 = 71.428 rounded to = 71 respondents
From the formula above, the calculation results for the number of samples selected in this study were 71 respondents.

2.2. Data Collection Using Questionnaires

The total number of questionnaires distributed to respondents was 71 participants for patients at the Health Centre. The questionnaire contains questions to obtain information about services at the health centre. In this questionnaire, the question items refer to the "patient evaluation and interest questionnaire." For respondents to be able to more clearly understand the questionnaire that will be distributed, based on five dimensions, questions that represent the dimensions of service quality are used. The questions used in this research questionnaire can be seen in Table 1.

Table 1. Questionnaire For Respondents

A	**Tangible**
1	The health equipment at the Health Centre is sufficient to support the services.
2	The Health Centre has a building that is kept clean and tidy and is served by professional staff.
3	There is an adequate waiting room at the Health Centre to accommodate incoming patients.
4	The pharmacy at the Health Centre is equipped with a complete range of medicines.
B	**Reliability**
5	The doctor examined the patient with great care.
6	The doctor prescribed the right medicine for the patient.
7	The doctors provide appropriate treatment advice to patients.
8	The health centre provides efficient and targeted services.
C	**Responsiveness**
9	Nurse/health centre staff informs the patient about a possible delay in the examination.
10	Health centre staff convey the necessary information.
11	The doctors are willing to listen to patient complaints.
12	Officers receive and serve well.
D	**Assurance**
13	Health Centre officers always show calm when dealing with patient complaints.
14	The doctors continuously provide a friendly welcome to every patient who enters their room.
15	Patiently, the doctor explains the disease that the patient is experiencing.
16	Health workers provide services with high confidence so that patients feel calm.
E	**Empathy**
17	The doctors always ask about the patient's condition.
18	The doctors always remember the patient's previous complaints.
19	The health centre registration officer always asks about the condition of each patient who comes.
20	The officer's readiness to apologise for any mistakes that occur

2.3. Validity Test

This testing process involves calculating the correlation between the instrument item score and the total score. From the results of the recapitulation of the questionnaire of 71 respondents tested with a validation level using the SPSS 25 software tool with α = 10% and degree of freedom (df) = N-2 = 71-2 = 69, then the r table value = 0.235. By carrying out this test, it can be concluded that each attribute of the questionnaire question is valid, where the calculated r is higher than the r table. The results of the validity test of satisfaction level and interest level can be shown in Table 2.
Based on the results of the validation test using 71 questionnaires with the help of SPSS 25 for Windows software, it can be seen that the calculated r is greater than the table r with a value of 0.235, so it can be concluded that the questions in the questionnaire are valid.

2.4. Reliability Test

The following are the results of Cronbach's Alpha in the reliability test of satisfaction scores and importance scores for Health Centre patients in Table 3.
From the data processing in Table 3, the Cronbach's Alpha value is 0.962 for the satisfaction level and 0.971 for the importance level. Because both exceed the number 0.6, it can be concluded that the questionnaire at the performance and expectation levels is declared reliable.

Table 2. Results of the Validity Test of Satisfaction Level and Interest Level

No	Attribute	R Count		R table	Status
		Satisfaction	Interest		
1.	T1	0.742	0.789	0.235	Valid
2.	T2	0.684	0.865	0.235	Valid
3.	T3	0.780	0.806	0.235	Valid
4.	T4	0.782	0.743	0.235	Valid
5.	R5	0.745	0.831	0.235	Valid

6.	R6	0.770	0.798	0.235	Valid
7.	R7	0.745	0.776	0.235	Valid
8.	R8	0.836	0.874	0.235	Valid
9.	R9	0.789	0.788	0.235	Valid
10.	R10	0.833	0.874	0.235	Valid
11.	R11	0.812	0.839	0.235	Valid
12.	R12	0.736	0.733	0.235	Valid
13.	A13	0.816	0.799	0.235	Valid
14.	A14	0.812	0.766	0.235	Valid
15.	A15	0.781	0.801	0.235	Valid
16.	A16	0.786	0.846	0.235	Valid
17.	E17	0.744	0.827	0.235	Valid
18.	E18	0.741	0.757	0.235	Valid
19.	E19	0.612	0.758	0.235	Valid
20.	E20	0.750	0.766	0.235	Valid

Table 3. The results of the Cronbach's Alpha in the reliability test of satisfaction scores

Cronbach ' Alpha		
Satisfaction	**Interest**	**N of Item**
0.962	0.971	20

3. Results and Discussion

3.1. Importance Performance Analysis (IPA)

The Importance Performance Analysis (IPA) method was first introduced by Martilla & James, stating that IPA can be used as a method of measuring satisfaction received by consumers and also as an example that can be used to analyse the performance of a business entity and an organisational body using a multi-property example. The first stage in the analysis using the IPA method means using field information that is distributed to a sample where the questionnaire already contains a Likert scale, then conducting an analysis of the degree of similarity is a consequence of testing the weight of the presentation score with the weight of the significance score. Degree of suitability. This will then be used to determine the grouping of variables that choose empirical and fulfil customer satisfaction [26], [27]. Here is the meaning of the formula for the level of suitability:

$$Tki = \frac{Xi}{Yi} x\ 100\% \quad (2)$$

Description:
TKi = level of suitability
Xi = service provider performance score
Yi = consumer expectation score
Based on the formula above, the following calculations can be made:

$$Tki = \left(\frac{Xi}{Yi}\right) x\ 100\ \%$$

$$= \frac{230}{250} \text{ x } 100\ \% = 92\ \%$$

Table 4 shows the result of calculations of Importance Performance Analysis (IPA) for each attribute of service quality.

Table 4. Results of Importance Analysis (IPA) Calculations

Attribute	Satisfaction Level (X)	Level of Interest (Y)	Conformity Level %	Average Satisfaction (X)	Average Interest (Y)
T1	230	250	92,00%	3,24	3,52
T2	255	274	93,07%	3,59	3,86
T3	250	269	93,94%	3,52	3,79
T4	235	261	90,04%	3,31	3,68
R5	252	280	90,00%	3,41	3,94
R6	266	282	94,33%	3,75	3,97
R7	248	272	91,18%	3,49	3,83
R8	235	266	88,35%	3,31	1,56
R9	235	256	91,80%	3,31	3,61
R10	246	267	92,13%	3,46	3,76
R11	263	279	94,27%	3,70	3,93
R12	243	261	93,10%	3,42	3,68
A13	230	270	85,19%	3,24	3,80
A14	252	275	91,64%	3,55	3,87
A15	263	279	94,27%	3,70	3,93
A16	261	281	92,88%	3,68	3,96
E17	262	274	95,62%	3,69	3,86
E18	244	264	92,42%	3,44	3,46
E19	227	252	90,08%	3,20	3,55
E20	243	264	92,05%	3,42	3,72
	Total			69,44	73,27
	Average		**91,87%**	**3,472**	**3.6635**

Based on the calculation results in Table 4, the level of conformity between the level of satisfaction and the level of importance shows an average suitability of 91.87%. The average satisfaction result (x) is 3.472, and the average interest (y) is 3.6635.

3.2 Cartesian Diagram

The results of the average calculation of all levels of satisfaction (x) and importance (y) are used as divisors in the importance performance analysis (IPA) diagram into four quadrants, namely quadrant I (top priority), quadrant II (maintaining performance), quadrant III (low priority), quadrant IV (excessive) [28]. This diagram consists of four quadrants:

a. Quadrant I (primary priority) An area contains factors that are claimed to be significant by the respondent, but the exhibition is not in sync with the respondent's interests or estimates (fulfilment obtained by the respondent is still low). Factors included in this quadrant area must be expanded.

b. Quadrant II (maintain achievement) An area contains factors that are indicated by the respondent in sync with his sentiment, to fulfil it relatively high. The nature of the factors remembered for this quadrant area must be maintained because it is an interesting factor for the respondent.

c. Quadrant III (low priority) means an area containing variables that are ordinary and less special to respondents. Increasing variables in this quadrant area can be done, but it is not a primary priority because its influence on respondents is not too great.

d. Quadrant IV (hyperbola) means an area containing variables that have good performance from respondents and are claimed to be hyperbolic in their performance. Variables in this quadrant often do not require performance improvement and can even be reduced, so the company can save costs.

To determine the meeting point between the perpendicular lines (X) and (Y) that divide the area using the formula:

Satisfaction (X) = $\frac{\sum_{i=1}^{n} Xi}{} = \frac{69,44}{20} = 3,47$

Interest (Y) Y = $\frac{\sum_{i=1}^{n} Yi}{k} = \frac{73,27}{20} = 3,6635$

The cartesian graph in Figure 2 shows the position of attributes that influence the level of satisfaction

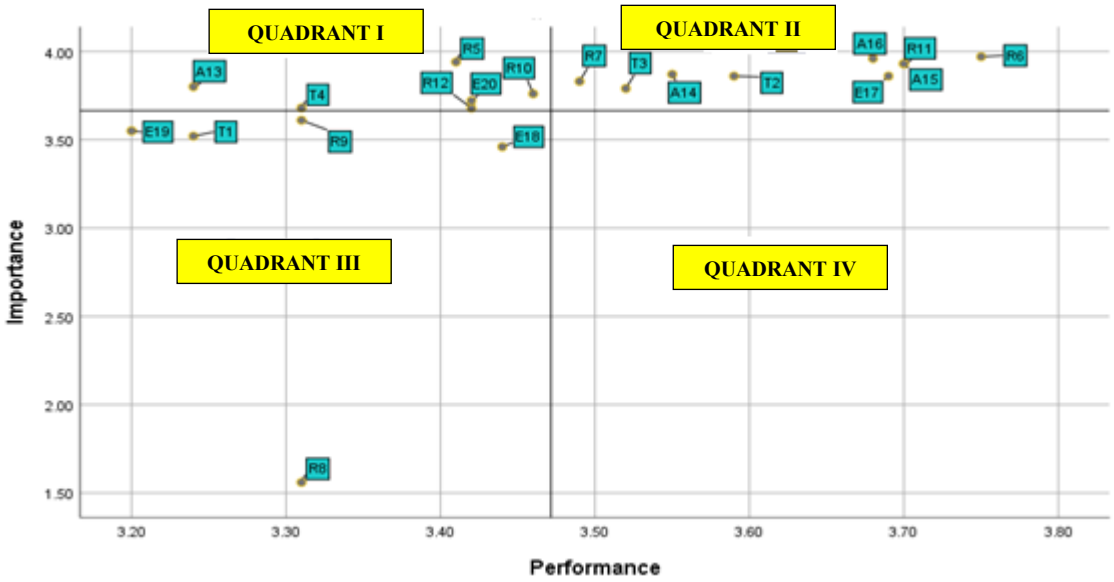

Fig 2. The position of attributes that influence the level of satisfaction

Based on the mapping of the Cartesian diagram in quadrant I (top priority) requires attention is required that must be prioritised by the management level, because the characteristics in this section are considered very significant by patients. However, the quality of service is not optimal, so the health centre needs to improve the quality of its services [29]. These features are weaknesses or deficiencies in the Health Centre in the service performance that is applied. There are 6 attributes, namely (T4), (R5), (R10), (R12), (R13), and quadrant II (maintain performance), considered as a part that must be maintained [30]. Considering that the attributes in this quadrant are considered very important for patients, so that the health center needs to maintain the quality of existing services, there are 9 attributes, namely (T2), (T3), (R6), (R7), (R11), (A11), (A15), (A16), (E17). Quadrant III (low priority) is considered a low priority section because the characteristics in this quadrant are considered irrelevant or less important by patients. With less than optimal service, there are 5 attributes, namely (T1), (R8), (R9), (E18), and (E19). Quadrant IV (Unnecessary Excess) is grouped for excessive zones, according to respondents the performance is good and there is nothing excessive. because There are elements that divide patients Not a priority, but by the Health Center Organized optimally, so it is not the most important thing to pay attention to, there are no attributes that exceed the limit.

4. Conclusion

The results of patient assessments of Community Health Centre services show that several attributes still do not meet patients' expectations. This can be seen from the existence of patient needs in service efficiency that does not meet expectations, where high expectations are not comparable to the performance provided by the Health Centre, leading to patients being dissatisfied with the service efficiency provided. Of the five dimensions of service quality in this study, the main priority attributes to be improved to meet patient needs in service quality are six attributes in the tangibles dimension (4) Public health facilities have a pharmacy with a complete supply of drugs, reliability dimension (5) Medical experts examine patients seriously, responsiveness dimension (10) Public health center staff convey the necessary information, responsiveness dimension (12) Officers receive and serve well, assurance dimension (13) Health

center officers are always patient in dealing with patient complaints, empathy dimension (20) Sincerity of staff to apologize if an error occurs, which is included in quadrant I with the main priority category, which means that improvements are needed to be able to increase and maintain patient visitor satisfaction.

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