Servqual Gap and Comparative Analysis of Service Quality Perception: Determination Framework and Critical Factors for Submission of Service Quality in the Public Health Center (Puskesmas) in Sukawati District, Gianyar Region, Bali - Indonesia

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Abstract:

This study aims to find out the critical factors in delivering the quality of services at the Public Health Center (Puskesmas) in Sukawati District. Determination of critical factors based on Servqual Gap is a comparison between expectations and perceptions of the quality of service perceived by patients/public health visitors. The research method is using qualitative descriptive analysis. The critical factor is determined by making a Cartesian diagram which is sourced from Serqual GAP. Data was obtained from the distribution of questionnaires to 200 respondents. The results of the data analysis concluded that there were 10 indicators in the Puskesmas Sukawati I that were categorized as critical factors that had to be corrected immediately. While Puskesmas Sukawati II there are 2 indicators that must immediately be improved. The comparative analysis shows that there is a significant difference between patient expectations and perceptions of perceived service quality. This result is certainly a consideration for the management of the Puskesmas to be able to assess the accuracy of the services provided to the community so that it can improve the quality of services in the future.

Keywords: Servqual Gap, Cartesian Diagram, Comparative Analysis.

1. Introduction:

Service quality is an important issue for the development of society today. Service quality is difficult to understand and difficult to measure because it contains perceptions of service quality from the comparison between consumer expectations and actual service performance (Siddiqui and Shahjahan, 2007). Some of the most influential models in the service management literature focus on the concept of service quality gaps. The gap in service quality is defined as the difference between customer expectations and service perceptions (Shahin and Monireh, 2010).

Service quality has become an important issue in marketing and many organizations have tried hard to
evaluate and regularly assess the level of service quality (Yousapronpaiboon and William, 2012). Service quality and customer satisfaction are generally recognized as determinants of long-term business success (Martin, 2016). The quality of service must be in accordance with the expectations desired by each consumer. At the higher level of suitability between expectations and quality service provided by the company, there is a maximum value of satisfaction (Permata, 2013). Several conceptual models have been developed by different researchers to measure service quality. It is assumed that the conceptual model in service quality allows management to identify quality problems and ultimately can help plan the launch of a quality improvement program, thereby increasing overall efficiency, profitability and performance (Seth and Desmukh, 2005).

The dimensions that focus on the gap in service quality in this study include: (1) reliability as the company's ability to carry out the promised services accurately and reliably, (2) responsiveness which shows the willingness to help customers and provide services quickly and responsively, (3) Assurance shows the extent of employee knowledge and politeness and the ability to create images or perceptions good for the company, by growing trust and confidence in the minds of consumers towards the company, (4) empathy as a condition for caring and giving personal attention to customers, and (5) tangible evidence of physical facilities, equipment, personnel and communication media (Tjiptono, 2011).

The Puskesmas is the first backbone for public health in Indonesia. The Puskesmas is expected to be an extension of the government to maintain and improve public health. The health effort is carried out by focusing on services for the wider community in order to achieve optimal levels of health, without neglecting the quality of service to individuals. To provide good service, of course there is always an effort to improve the quality of service in order to achieve optimal health status for the entire community.

Improved quality of service to be able to improve community satisfaction to health care organized by the Center for Public Health so that this research is very important to do. This study aims to be able to analyze the actual or perceived gaps between customer expectations and perceived quality of services offered so that service improvement management can be more logical and integrated with respect to the dimensions of service quality that are prioritized and the attention of the Community Health Center in Sukawati District in reducing inequality quality of service. In addition, this study also compared community perceptions of the quality of services delivered by the Community Health Centers in Sukawati District.

Based on the background g, researchers interested in conducting research on the service quality gap analysis and determination can create a framework and prioritization of critical now factor in the delivery of quality services to improve the quality of services at community health centers in the district Sukawati, Gianyar.

2. Literature Review:

2.1 SERVQUAL / Service Quality:

One of the most common things in measuring and evaluating a quality service in health services is SERVQUAL (Service Quality) which includes five dimensions namely tangibility, reliability, responsiveness, assurance and empathy (Abolghasem et al., 2013; Ramanujam et al., 2011, Borie and Damanhourri et al. 2013) According to Parasuraman in Tjiptono (2009), there are 5 dimensions of Servqual forming namely:

1. Tangibles, or physical evidence, is the ability of a company to show its existence to external parties.
2. Reliability, is the company's ability to provide services as promised accurately and reliably.
3. Responsiveness which is a willingness to help and provide services that are fast and appropriate to the customer, with the delivery of clear information.
4. Assurance, or assurance and certainty, namely knowledge, courtesy of compensation, and the ability of company employees to foster a sense of customer trust in the company.

5. Empathy, which is an attempt to know and understand customer needs individually.

2.2 Service Quality Gap Model:

The service quality model that is very popular and is now widely used as a reference in research marketing is the SERVQUAL Model (short for service quality) developed by Parasuraman, VA Zeithhaml, and LL Berry. Model this includes analysis of five gaps which affects the quality of services, as causes of service delivery failures as presented in Figure 1:

![Figure 1 Service Quality Gap Model](image)

**Source:** A. Parasuraman, Valarie A. Zeitham l, and Leonard L. Berry (1985) in Permata (2013)

The seven gaps are quoted by Fandy Tjiptono in Kaihatu (2008), namely:

a. Gap 1, The gap between consumer expectations and management perceptions: Management cannot always feel what customers want appropriately.

b. Gap 2, Gap between management perception and quality specification services: Management able to feel exactly what is desired by the customer, but does not draw up a standard of performance certain.

c. Gap 3, Gap between service specifications and service delivery: Employees of the company may be less trained or work beyond limits and cannot and do not want to meet the standards.

d. Gap 4, gap between service delivery and external communication: Consumer expectations are influenced by the statement - the statement made by the representative and advertising companies.

e. Gap 5, The gap between expected services and perceptions of services delivered: As a result of the influence given from the customer side and the gap on the part of the service provider. In this
case, customer expectations are influenced by the level of personal needs, word of mouth recommendations and past experiences.

f. Gap 6, Gaps between consumer expectations and employee perceptions: As a result of differences in understanding customer expectations by Front-Line service providers.

g. Gap 7, the gap between employee perceptions and management perceptions: As a result of differences in understanding customer expectations between managers and service providers.

According to Brown and Bond in Kaihatu (2008), "the gap model is one of the best received and most contributes to the service literature". This model identifies seven key k etidaksesuaian or gaps related to managerial perceptions of the quality of services, and tasks associated with the delivery of services to customers. Six first gap (Gap 1, Gap 2 Gap 3 Gap 4 Gap 6 and Gap 7) is d iidentifikasi as a function of how the provision of services, while Gap 5 relates to p elanggan and is thus considered as the true measure of the quality of service. Where is the gap The SERVQUAL methodology has an effect is Gap 5.

3. Research methods:

The population in this study were all people who had visited and felt the service in Puskesmas in Sukawati District, Gianyar, Bali. Determination of samples from certain populations developed from Isaac and Michael (Sugiyono, 2009), for error rates of 1 percent, 5 percent and 10 percent. The population number in this study is assumed to be infinite (∞) because the number of consumers is unknown and moves continuously according to the time of visit, if the population number (N) is infinite (∞) with a level of error of 10 percent then the number of samples (n) taken is equal to 200 people scattered in the Sukawati I Puskesmas and Sukawati II health centers. This study uses Accidental sampling method.

According to Kotler in Kaihatu (2008), services can be rated according to customer interests and company performance. Interest is rated on a scale, such as: very important, important, less important, and not important. While the performance was also rated with a four-point scale, such as: very good, good, not good, and not good.

In conducting research, this method will used to analyze descriptively service quality, viewed based on the level of suitability between services expected (consumer interests) with perceived services (company performance). The level of suitability referred to in research implementation is the result of a comparison of scores value of services expected (consumer interests) with perceived service value scores (performance company). The formula used for assessing the suitability level is:

$$TK_i = \frac{X_i}{Y_i} \times 100\%$$

Information:

$TK_i = \text{Suitability level}$

$X_i = \text{Perceived service assessment score}$

$Y_i = \text{Expected service assessment score}$

* Symbol $X_i$ is not interpreted as an independent variable.

** The symbol $Y_i$ is not interpreted as a dependent variable.

For the horizontal axis (X) is a score for perceived services, while for a significant contribution (Y) is the score for the expected service. The assessment scores will be simplified to get the average value of each factor. Simplification of each assessment factor using formula as following:

$$TK_i = \frac{X_i}{Y_i} \times 100\%$$

Information:

$X_i = \text{Perceived service assessment score}$

$Y_i = \text{Expected service assessment score}$

$\bar{X} = \text{Perceived service assessment average score}$

$\bar{Y} = \text{Expected service assessment average score}$
n = Number of samples

The Cartesian diagram is a building divided into four parts bounded by two lines that intersect at points (X, Y). For X is the average of the average perceived service score, and Y is the average of the expected average score. For details, the intended formula is:

\[
\bar{X} = \frac{\sum_{i=1}^{n} X_i}{K} \quad \bar{Y} = \frac{\sum_{i=1}^{n} Y_i}{K}
\]

Information:
\( \bar{X} \) = Perceived service assessment score
\( \bar{X} \) = Perceived service assessment average score
\( \bar{Y} \) = Expected service assessment average score
K = Number of factors

Each dimension of good ratings mean score - ratapenilaian services that are perceived (X) and skorrata average expected ratings services (Y) dijabarkanke in four parts Cartesian diagram.

4. Analysis Results:
The analysis was carried out in two different places, at Puskesmas Sukawati I and Puskesmas Sukawati II. The results of the analysis are as follows.

1. The level of suitability of visitors perceptions and expectations of Puskesmas Sukawati I

In accordance with Annex 1, the Cartesian Diagram is as follows.

![Figure 3. Kartesius Diagram of Puskesmas Sukawati I](image)

In Figure 3 the Cartesian Diagram, it appears that the location of the attributes that are illustrative assessment of expected service quality and service quality visitors to the Puskesmas Sukawati I were perceived as follows.

- Quadrant A (Critical Factor), shows the attributes affect consumer satisfaction, but parties Puskesmas Sukawati I has not been able to implement it well, so that it must improve its performance including: banner function in providing health information for the community, convenience of parking lots, cleanliness/hygiene of toilets, accuracy of operating hours, speed of janitors, speed of registration officers, speed of medical services, speed of cleaning staff, accuracy of information from clerk of the counter and providing health information from the doctor.
- Quadrant B, shows attributes that affect visitor satisfaction, Puskesmas Sukawati I has implemented according to consumer expectations so that performance must be maintained, including: reliability of machine tool queues in supporting services, cleanliness of the waiting room, completeness of the doctor's equipment, state of the pharmacy room, courtesy of the attendant ticket booth, hygienic equipment in drug delivery, hygienic equipment from the doctor and speed in the process of giving drugs at the pharmacy.

- Quadrant C, shows that the attributes that are in this quadrant, are considered less important by consumers. While the quality of services provided by UPT. Puskesmas Sukawati I is quite sufficient. The attributes included in the C quadrant include: The ability of employees at the registration counter in providing information, politeness / hospitality of doctors / midwives, politeness / hospitality of pharmacy officers, politeness / friendliness of other officers.

- Quadrant D, shows that the attributes in this quadrant are considered less important by consumers, but the quality of services provided by the Sukawati I Health Center is very good. In this study there is no quality of service in the quadrant D.

Wilcoxon test:

Based on the "statistical test" output above, Asymp is known. Sig (2 tailed) worth 0.000. Because 0.000 is smaller than 0.05, it can be concluded that H1 is accepted meaning that there is a significant difference between the perception and expectations of visitors / patients at Puskesmas Sukawati I.

| Test Statistics |  |
|-----------------|---|
| Z               | -4.286 |
| Asymp. Sig. (2-tailed) | .000 |

Fig 4. Kartesius Diagram of Puskesmas Sukawati II

In Figure 4 Cartesian Diagram, it appears that the location of the attributes that are illustrative assessment of expected service quality and service quality visitors to the Puskesmas Sukawati II were perceived as follows.

- Quadrant A (Critical Factor), shows the attributes affect customer satisfaction, but Puskesmas Sukawati II has not been able to implement it well, so it must improve its performance including: the state of the pharmacy room which is one with the payment counter, the cleanliness of the waiting room.

- Quadrant B, shows the attributes that affect visitor satisfaction, the Puskesmas Sukawati II has implemented in accordance with consumer expectations so that performance must be maintained, among others: reliability of queue machines in supporting services, completeness of medical equipment, accuracy of operating hours, ability of registration employees in providing clear information, the use of hygienic equipment, pharmacy officers' hygienic equipment, speed of registration officers in service, speed of physician services, speed of service of pharmacy officers, courtesy of...
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doctors, providing important information from doctors, apotel officers providing important information for patients.

- Quadrant C, shows that the attributes that are in this quadrant, are considered less important by consumers. While the quality of services provided by the Puskesmas Sukawati II is quite a poster / banner to provide information, the convenience of a parking lot, the attention of other officers to the patient.

- Quadrant D, shows that the attributes in this quadrant are considered less important by consumers, but the quality of service provided by the Puskesmas Sukawati II very good, namely the courtesy of the staff of the registration counter and the hospitality of the pharmacy officer.

\[ \text{Wilcoxon test:} \]

Based on the "statistical test" output above, Asymp is known. Sig (2 tailed) worth 0.000. Because 0.000 is smaller than 0.05, it can be concluded that H1 is accepted meaning that there is a significant difference between the perception and expectations of visitors / patients at Puskesmas Sukawati II.

\[
\begin{array}{cccc}
\text{Test Statistics} & \text{Persepsi} & \text{Harapan} & \text{Asymp. Sig. (2-tailed)} \\
\hline
Z & -4.286 & \text{.000} \\
\text{a. Based on positive ranks} & \text{b. Wilcoxon Signed Ranks Test} \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{Attachment 1 Results of GAP Analysis at Sukawati I Health Center} \\
\hline
\text{No.} & \text{Indicator} & \text{Average Expectations} & \text{Average Perception} & \text{GAP} & \text{No.} & \text{Indicator} & \text{Average Expectations} & \text{Average Perception} & \text{GAP} \\
\hline
A & \text{Tangibles (Physical Proof)} & & & & \text{C} & \text{Responsiveness (responsiveness)} & & & \\
1 & \text{Tool / machine in line in supporting health services} & 3.90 & 3.76 & -0.14 & 13 & \text{Speed of registration officers in providing services to the community} & 3.86 & 3.26 & -0.60 \\
2 & \text{Cleanliness / hygiene of the waiting room} & 3.91 & 3.47 & -0.44 & 14 & \text{Speed and timeliness of doctor / midwife service processes in the examination room} & 3.86 & 3.23 & -0.63 \\
3 & \text{Completeness / hygiene equipment in the doctor / midwife room} & 3.93 & 3.49 & -0.44 & 15 & \text{Speed and timeliness of service processes for officers at pharmacies / payment counters} & 3.89 & 3.74 & -0.15 \\
4 & \text{The state of the pharmacy room and payment counter} & 3.91 & 3.66 & -0.25 & 16 & \text{The politeness and friendliness of the registration booth staff} & 3.94 & 3.06 & -0.88 \\
5 & \text{Posters / banners to provide health information to the public} & 3.96 & 3.03 & -0.93 & & \text{Average Responsiveness} & & & \text{-0.57} \\
6 & \text{Parking lot comfort} & 3.91 & 2.96 & -0.95 & \text{D} & \text{Assurance} & & & \\
7 & \text{Toilet hygiene / hygiene} & 3.96 & 3.03 & -0.93 & 17 & & & & \\
\hline
\end{array}
\]
### Attachment 2 Results of GAP Analysis at Sukawati II Health Center

| No. | Indicator of Hope                          | Average Expectations | Average perception | GAP   |
|-----|-------------------------------------------|----------------------|--------------------|-------|
| A   | Tangibles (Physical Proof)                | 3.91                 | 3.27               | -0.64 |
|     | C  | Responsiveness (responsiveness)           |                      | 3.89  | 3.37  | -0.52 |
| 1   | Tool / machine in line in supporting health services | 3.91                 | 3.27               | -0.64 |
| 2   | Cleanliness / hygiene of the waiting room | 3.9                  | 3.13               | -0.77 |
| 3   | Completeness / hygiene equipment          | 3.94                 | 3.38               | -0.56 |
|   | Service Aspect                                                                 | Average Gap (GAP) | GAP Value |   |   |   |
|---|-----------------------------------------------------------------------------|-------------------|----------|---|---|---|
| 4 | The state of the pharmacy room and payment counter                          | 3.92              | -0.88    | 16|   |   |
|   | the speed of the janitor in cleaning the room                               | 3.79              | 2.78     | -1.01 |   |   |
| 5 | Posters / banners to provide health information to the public               | 3.58              | -0.77    |   |   |   |
|   | Average GAP Responsiveness                                                   |                   |          |   |   |   |
| 6 | Parking lot comfort                                                         | 3.76              | -0.88    | D | Assurance |   |
| 7 | Toilet hygiene / hygiene                                                    | 3.73              | -1.18    |   |   |   |
|   | The politeness and friendliness of the registration booth staff             | 3.8               | 3.25     | -0.56 |   |   |
|   | Average GAP Tangibles                                                        | -0.81             |          |   |   |   |
| B | Reliability                                                                 | 19                |          |   |   |   |
| 8 | Accuracy of operating hours (08.00-13.00)                                   | 3.87              | -0.25    | 20|   |   |
|   | The politeness / friendliness of other officers                            | 3.81              | 3.12     | -0.7  |   |   |
| 9 | The ability of employees at the registration counter to provide clear information | 3.87          | -0.65    |   |   |   |
|   | Average GAP Assurance                                                        |                   |          |   |   |   |
| 10| Doctors / midwives use hygienic equipment to serve patients                 | 3.94              | -0.35    | E | Empathy (Empathy) |   |
| 11| Pharmacy officers use hygienic equipment in providing medicine             | 3.92              | -0.52    | 21|   |   |
|   | The counter clerk gave good attention and information to the patient       | 3.89              | 3.24     | -0.66 |   |   |
| 12| The janitor cleans the room / sterilizes at any time                        | 3.78              | -1.05    | 22|   |   |
|   | Doctors / midwives provide patients with important information about health | 3.9               | 3.47     | -0.43 |   |   |
|   | Average GAP Reliability                                                      | -0.56             |          | 23|   |   |
|   | Pharmacy officers provide important information to patients regarding health| 3.89              | 3.31     | -0.58 |   |   |
|   | Average GAP                                                                  | -0.65             |          | 24|   |   |
|   | other officers give good attention to patients                              | 3.82              | 2.89     | -0.93 |   |   |
5. Conclusions and Research Implications:

The conclusion that can be drawn from the results of this study is that the Puskesmas Sukawati I and Puseksmas Sukawati II have a priority on different critical factors. The critical factors that must be prioritized in services in order to improve services in the future are as follows.

Critical Factors in Puskesmas Sukawati I located in Quadrant A include banner function in providing health information for the community, convenience of parking lots, cleanliness/hygiene of toilets, accuracy of operating hours, speed of cleaning staff, speed of registration officers, speed of medical services, speed of cleaning staff, accuracy information from the counter clerk and the provision of health information from the doctor.

Critical Factors in Puskesmas Sukawati I located in Quadrant A include the state of the pharmacy room which is one with the payment counter and the cleanliness of the waiting room.

Of course in its implication the head of the Puskesmas and its staff must be able to immediately improve services that are in critical factors in order to improve the quality of services in the future. The head of the Puskesmas can improve services by allocating resources more precisely. Something that is less important in service can be allocated in activities that do require good service so that the quality of service can be done appropriately.

This research can be used as a reference for all health centers in Bali as an important step to be able to prioritize critical factors in service so that good quality services can be provided to the community.

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