The Influence of Service Quality and Customer Relationship Management with Satisfaction Intervening Variables on the Loyalty of Health Facilities I

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Abstract

Patient loyalty is indicated by satisfaction a factor that can reflect the quality of service from the local health service. Customer Relationship Management is the management of its customers that can provide. This study aims to see the effect of Service Quality, Customer Relationship Management, Satisfaction, and patient loyalty. The population of this study focused on patients in health facilities in the Jasinga District by sampling, namely purposive sample where the sample was patients who used health facilities in Jasinga District as many as 205 respondents. This type of research is quantitative, with data collection by distributing questionnaires. The analytical method used is the Structural Equation Model (SEM-PLS) with the SMART PLS software program. Some of the findings in this study are that service quality has a positive effect on patient satisfaction. Customer Relationship Management has a positive effect on patient satisfaction. Customer Relationship Management has a positive effect on Patient Loyalty. Service quality has a positive effect on patient loyalty and finally, satisfaction has a positive effect on patient loyalty. This study has implications for increasing patient loyalty by providing information to help manage the quality of health services and customer relationship management by encouraging satisfaction so that it will always increase patient loyalty significantly.

Keywords: Service Quality, Customer Relationship Management, Satisfaction, Loyalty.

1. Introduction

With the increase in living standards, and demands for ease of access to various information, as well as demands for quality and quantity of good medical services, it is hoped that this will continue to increase. The increasing level of awareness and expectations of citizens and the number of consumers of medical services means that only medical institutions that meet these expectations can be managed sustainably. In response to such social trends, the healthcare market is shifting from supplier-oriented to customer-oriented. Providing high-quality service is one of the main functions of the health system (Mohebifar et al., 2016). Therefore, the quality of health services is a very important part (Bahadori et al., 2018) as well as being an inevitable part of life, and to achieve a healthy life the community always demands high-quality health services (George & Sahadevan, 2019) (Singh et al., 2020). Therefore, many health services are concerned with providing quality services to their patients based on information obtained from patients’ perceptions of service quality (Neupane & Devkota, 2017). Service quality has an important role in increasing satisfaction and intention to return, so it is important for service companies to provide quality services for customers, to create customer satisfaction and retention (Zena & Hadisumarto, 2013).

Customer relations can build a positive corporate image in the minds of customers, which can then affect the level of customer loyalty from satisfied customers to the company's performance (Zhang et al., 2016). Understanding patients' perspectives and providing them with what they need will help healthcare to win business (Hehenkamp & Kaarboe, 2020). Good relationships with customers are stated as a company's method to create mutually beneficial and valuable long-term relationships (Hayati et al., 2020). Management must ensure that quality services are provided according to government standards and delivered optimally (Chakraborty et al., 2021). Increasing patient visits will keep them in the current health business competition (Arici & Güçer, 2018).

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(Hung et al., 2010) that Customer Relationship Management for healthcare providers is an approach where they learn anything related to their patients, their point of view, and expectations to establish a relationship with them, provide timely information and follow up, their related results so that they can take corrective actions, increase customer loyalty and earn more profits. Patient loyalty will be the key to success not only in the short term but a sustainable competitive advantage (Arab et al., 2017). The creation of patient loyalty certainly cannot be separated from the quality of services provided by health facilities. According to (Juhana et al., 2015) that Service Quality has a close relationship with patient satisfaction. Good service quality encourages patients to establish strong relationships with the company. (Afriani et al., 2019) Companies and customers must be able to respect each other and value their position. When you respect each other and do your best to create accessible communication, it will lead to success.

Patient satisfaction can be understood as an outcome measure expressed by the patient where the structure and process of care received by the patient can be measured by the experience felt by the patient (Ullah et al., 2020). So patient satisfaction is a major factor in patient expectations which is very important in measuring the quality of health care because it provides insight into the progress of workers toward patient desires (Umoke et al., 2020); (Xesfingi & Vozikis, 2016). On the other hand, Optimizing patient satisfaction in health services has many benefits. It has been empirically proven that satisfied patients have better rates of acceptance and adherence to care and treatment and thus overall improved health outcomes (Mallat et al., 2021). For this reason, in increasing loyalty, it is necessary to maintain trusts such as honesty, benevolence, and competence in health services and service quality such as the convenience of facilities and empathy of medical personnel for service users (Iqbal & Rhian Indra Dewa, 2020).

Previous studies such as those conducted by (Vigaretha & Handayani, 2018) show that there is an influence between service quality on loyalty, service quality on satisfaction, satisfaction with loyalty and satisfaction can mediate the relationship between service quality and loyalty. The results of the study (Bushra, R., & Mudassir, 2018) reveal that the most important factors that influence the dimensions of service quality are tangible" (physical facilities, equipment, and appearance of personnel)" and empathy "(care, individual) the attention given by the company to its customers)" so this is the most important factor of the Service Quality model that has an impact on service quality. The results of the study (Fadillah et al., 2019) revealed that Service Quality has a direct effect on Customer Satisfaction, which then directly affects Loyalty. Customer loyalty does not guarantee that management only improves the quality of service to customers. To achieve loyalty, customers must ensure the satisfaction of their customers, because of the many factors that can affect customer satisfaction, the management must improve the quality of its services with various promotions or socialization activities. However, the study only looked at one side. In this study, Customer Relationship Management variables were added, which can be applied to increase loyalty where satisfaction can strengthen relationships.

This research plan is to examine the model of patient loyalty from a relational perspective and the model of patient loyalty and satisfaction. Data were analyzed in two separate but related steps sequentially using structural modeling equations with partial least squares. Primary health care practice needs to recognize various obligations that affect patient satisfaction and loyalty, which in turn affects service quality. Therefore, public health services need to improve their services to achieve excellent quality and attract more patients (Setyawan et al., 2020).

2. Literature Review

2.1 Service quality

Service quality is define as a series of decisions made by customers after they have had experience with a product or service over time (Ismail et al., 2016). Service quality is also define as the difference between customer expectations and performance experience after using the service (Joudeh & Dandis, 2018). Service quality is seen as the customer's perception of the overall impression of relative strength or inferiority of a particular company and its service delivery (Neupane & Devkota, 2017). Focus on Service Quality and provide customers with outstanding quality. Service is a stepping stone to convincing customers to use services repeatedly (Ismail et al., 2016). In the context of health services, mechanistic quality implies objective aspects or characteristics of health services while humanistic quality implies patient subjective responses to health services (Javed et al, 2017).

Service Quality has become a buzz in today's competitive business world because it is considered an important factor for survival and success, to evaluate service performance, based on five dimensions namely Tangibles refers to the physical facilities, equipment, or equipment used to provide services and staff performances (Selim Ahmed, Kazi Md. Tarique, Ishtiaque Arif, 2017). Reliability, Reliability involves consistency and dependability of service, which refers to the ability to provide services reliably and accurately that customers want, Responsiveness concerns the willingness
or readiness of service providers to offer prompt. Assurance refers to employee knowledge, courtesy, and ability to convey trust and confidence. Assurance, Empathy refers to caring, knowing customer demands, and individual attention given to customers.

2.2 Customer Relationship Management

Based on (Santouridis & Veraki, 2017), the company's success in business now, depends on the effective management of relationships with customers. That way, Customer Relationship Management is very much needed for the sustainability of a business (Das, S., & Mishra, n.d.)2018. because it can build and significantly deepen the relationship between the customer and the company, thereby contributing to the company's success through customer loyalty, superior service, better information gathering, and corporate learning. (Rahimi & Kozak, 2017) also defines Customer Relationship Management as a business and marketing strategy that integrates technology, processes, and business activities around the customer. Definition based on (Mazyed et al., 2018), Customer Relationship Management is one of the strategies used by companies because this strategy is based on the integration of sales, marketing, and customer service to build value for the company and its customers.

Customer Relationship Management is a tool to improve the factors that affect patient satisfaction and loyalty (Hajikhani et al., 2016). Customer Relationship Management systems provide increased user satisfaction, organizational performance, and individual performance. Thats is clear evidence that the Customer Relationship Management system will increase the efficiency and effectiveness of the organization, which in turn can provide a competitive advantage for the company (Choi et al, 2013). According to (Abekah-Nkrumah et al., 2020) Items on CRM, are divided into several dimensions (customer service, communication, and information technology – IT) which are mostly used in the literature (Hajikhani et al., 2016) to capture CRM.

2.3 Satisfaction

Customer satisfaction is an assessment made by customers on products or services to achieve consumption (Mensah & Mensah, 2018). Customer satisfaction is also defined as a psychological condition of a customer that involves feelings or attitudes towards certain experiences or aspects after receiving a product or service (Neupane & Devkota, 2017). Customer satisfaction is associated with customer demand, and customers are satisfied only if the demand is fulfilled (Joudeb & Dandis, 2018). Better revenue can be achieved through customer satisfaction and this helps the business in getting more promising long-term profitability (Maugueta et al., 2017). It is necessary for small businesses to retain loyal customers and for new customers by providing satisfactory service (Rizan et al., 2020). Other research also states that if customers feel good value from the service after purchase, then satisfaction with the service will increase (Hermanus & Indradewa, 2022).

Customer satisfaction is described as customer attitudes, reviews, and emotional reactions after a purchase. Customer satisfaction is also defined as a description of the quality of a product or service provided to customers (Minarti & Segoro, 2014). According to (Husnain et al., 2019) there are 4 statement indicators in measuring customer satisfaction, namely the delivery of positive things about health services, Invite friends and relatives to use health services, Intention to continue to use this health service, and Having a strong preference at the health center.

2.4 Patient loyalty

Loyalty is the willingness of customers to continue to subscribe to a company in the long term, by buying and using its goods and services repeatedly, and voluntarily recommending the company's products to others (Setiawan & Setyohadi, 2018). Customer loyalty can be formed if the customer is satisfied with the brand or level of service received, and intends to continue the relationship (Erica & Rasyid, 2018). One of the efforts made by the company to improve the quality of work is to increase customer loyalty. Customers with a high level of loyalty will usually continue to use a brand even though they already have other alternative brands (Chandra, 2019). Reputable service users will have a high level of engagement, because they trust the brand to improve the quality of life in the eyes of the public, which will lead to loyalty to the service (Hasri Liayanti et al., 2022)

As a result of decisions made by consumers of health services to see whether their expectations are met or not, patient satisfaction can be described as consumers' feelings based on the experiences gained after they receive health services and treatment (Asnawi & Awang, 2018). Customer loyalty is measured by four indicators. according to (Anatha Pindika Putra Teguhl, Sunaryo Oentara, 2022), consisting of Repeat Purchase, Retention (resistance/retention by customers against news/issues that are negative to a company), trust or trust, emotional commitment, or psychological commitment that is strong, word of mouth or customer behavior to convey testimonials and referrals (referring the company or its products to others).
Based on the explanation above, this study aims to examine the effect of service quality and customer relationship management on customer loyalty with customer satisfaction as an intervening variable. The formulation of the problem that will be tested further in this study includes:

a) Does service quality have a positive effect on customer satisfaction?
b) Does customer relationship management have a positive effect on customer satisfaction?
c) Does customer relationship management have a positive effect on customer loyalty?
d) Does service quality have a positive effect on customer loyalty?
e) Does customer satisfaction have a positive effect on customer loyalty?

![Figure 1: Conceptual Framework](image)

**H1:** Service quality affect positive customer satisfaction  
**H2:** Customer Relationship management affect positive customer satisfaction  
**H3:** Customer Relationship management affect positive customer loyalty  
**H4:** Service quality affect positive customer loyalty  
**H5:** Customer satisfaction affect positive customer loyalty

### 3. Methods

Respondents in this study were patients at level one health facilities in the jasinga area, Bogor district, with as many as 205 respondents. The sampling technique used was purposive sampling using a questionnaire instrument which was distributed directly to the respondents. In this study, data analysis used the Structural Equation Modeling (SEM) technique using SmartPLS. The analytical procedure in this study includes testing the inner and outer models and ends with hypothesis testing.

### 4. Result and Discussions

Discussions This study's first step is testing the outer model, which includes validity and reliability tests. This testing step aims to determine the relationship between the latent variable and the indicator that measure the latent variable.

### Table 1. Reliability Test Result & Latent Variable Validity Test Result.

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Cronbach' Alpha</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality</td>
<td>0.976</td>
<td>0.978</td>
<td>0.700</td>
</tr>
<tr>
<td>customer relationship management</td>
<td>0.963</td>
<td>0.967</td>
<td>0.710</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.918</td>
<td>0.942</td>
<td>0.803</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.940</td>
<td>0.953</td>
<td>0.771</td>
</tr>
</tbody>
</table>

The analysis results indicate that all constructs in the research model (relationship marketing, service quality, customer satisfaction, customer loyalty) have a Cronbach alpha value exceeding 0.70. Judging from the average variance extracted (AVE) results, all constructs have obtained a value exceeding 0.50 and a composite reliability value above 0.70. Based on these results, it can be concluded all constructs in this research model are valid and reliable.
Table 2. R-Square

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>0.880</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.901</td>
</tr>
</tbody>
</table>

The R-Square value obtained shows the magnitude of the contribution of the influence of the explanatory variable to the dependent variable. This value also measures the predictive ability of the research model. The results obtained are the ability of service quality variables and customer relationship management in explaining customer satisfaction by 88%. Then, the ability of all explanatory variables to explain the construct of customer loyalty is 90.1%. Based on these results, it can be concluded that the predictive power of the research model is quite strong.

Table 3. Hypothesis Test Result (Direct & Indirect Effect)

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Original Sample</th>
<th>T-Statistics</th>
<th>P-Value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality</td>
<td>0.462</td>
<td>5.460</td>
<td>0.000</td>
<td>H1 Accepted</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.491</td>
<td>5.724</td>
<td>0.000</td>
<td>H2 Accepted</td>
</tr>
<tr>
<td>Relationship Management</td>
<td>0.217</td>
<td>2.659</td>
<td>0.008</td>
<td>H3 Accepted</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.422</td>
<td>5.634</td>
<td>0.000</td>
<td>H4 Accepted</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.334</td>
<td>4.469</td>
<td>0.000</td>
<td>H5 Accepted</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Analysis the evaluation of the path coefficient structural model can be seen from the effects of each relationship between variables and is declared significant if the T-statistic > 1.96 and the P-value is < 0.05. Using a hypothesis test on the PLS-SEM model using bootstrapping, the results can be seen in Table 3 below. Based on the results of the t-statistical analysis as listed in the table, the hypothesis test on the dependent variable can be stated as follow:

a) Hypothesis 1: Service quality has a significant positive effect on patient satisfaction. The result of t statistic is 5.460 > 1.96 with P-value 0.000 < 0.05. Thus, hypothesis 1 in this study is accepted.
b) Hypothesis 2: Customer relationship management has a significant positive effect on patient satisfaction. The result of t statistic is 5.724 > 1.96 with P-value 0.000 < 0.05. Thus, hypothesis 2 in this study is accepted.
c) Hypothesis 3: Customer relationship management has a significant positive effect on patient loyalty. The result of t statistic is 2.659 > 1.96 with P-value 0.008 < 0.05. Thus, hypothesis 3 in this study is accepted.
d) Hypothesis 4: Service quality has a significant positive effect on patient loyalty. The result of t statistic is 5.634 > 1.96 with P-value 0.000 < 0.05. Thus, hypothesis 4 in this study is accepted.
e) Hypothesis 5: Customer satisfaction has a significant positive effect on patient loyalty. The result of t statistic is 3.181 > 1.96 with P-value 0.002 < 0.05. Thus, hypothesis 5 in this study is accepted.

5. Conclusions

This study examines the effect of service quality and relationship management on patient loyalty with patient satisfaction as an intervening variable. Based on the five problems that have been formulated previously, the following results are obtained:

a) Service quality has a positive effect on patient satisfaction. Quality of service with physical evidence regarding friendliness, the information provided, and the extent to which the level of communication, support, and response from a good doctor/nurse will affect the patient's perception. This aspect is a source that affects patient expectations. Because with good physical evidence, patient expectations are higher, it gives a positive impression on the quality of services provided but does not cause patient expectations to be too high so that they can meet patient needs and provide satisfaction to patients.

b) Customer relationship management has a positive effect on patient satisfaction. The relationship between the management of health facilities and patients can provide satisfaction because the communication and information technology service programs owned by health facilities are aimed directly at patients as a means of service to meet
the satisfaction of their unique needs of patients and can strengthen the position of health facilities as a personal symbol of individual service, which can help increase the level of patient satisfaction.

c) customer relationship management has a positive effect on patient loyalty. Optimizing the management of health facilities in terms of operational supervision can help supervise every employee to always provide excellent service to create patient loyalty. The CRM program is a concern because to make patients loyal it is necessary to have a good relationship between health facilities and patients.

d) Service quality has a positive effect on patient loyalty. The desire or willingness of medical personnel to help provide the promised service responsively and satisfactorily according to the patient’s perception can create patient loyalty to return for treatment.

Satisfaction has a positive effect on patient loyalty. Satisfaction of services that can be given maximally can increase patient loyalty after using the service and feel safe or comfortable in using health care products and services, so patients will give confidence to health facilities. This will make patients continue to use health services and in the end, will recommend them to others because they feel satisfied and believe in the quality of service of the health facility.

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**Figure 2. Research Model Construct**
References


Iqbal, M. A., & Rhian Indra Dewa. (2020). *The Effect of Trust and Service Quality to Customer Value Moderated by the Perceived Ease of Use ( Case Study Bluebird Taxi in Indonesia )*. 12(18), 82–89. https://doi.org/10.7176/EJBM/12-18-09


