

Public Health Center Patient Satisfaction: The Role of Empathy, Reliability, Responsiveness, Assurance, and Tangibles

Slamet Hari Sutanto
{slametharisutanto@gmail.com}

Research and Development Agency East Java Province, Surabaya

Abstract. This study's goal is to investigate the relationships between patient satisfaction and empathetic behavior, dependability, responsiveness, assurance, and tangibles. The aim is to analyze how these factors individually contribute to patient satisfaction levels. This approach to research is quantitative. The research was conducted within a hospital setting in Indonesia. The study included a sample of 370 hospital owners as respondents for data collection and analysis. Simple random selection, in which participants were chosen at random from the population, was the sample strategy used in this study. Online questionnaires that were disseminated through social media platforms were used for data gathering. In this study, the independent variables examined include Empathy, Reliability, Responsiveness, Assurance, and Tangibles, while the dependent variable of interest is Patient Satisfaction. According to the outcomes of the hypothesis test, empathy has a favorable and significant effect on patient satisfaction. Reliability, however, does not appear to have a major impact on patient satisfaction. However, responsiveness shows a large and favorable impact on patient satisfaction. According to the analysis, patient satisfaction is not significantly impacted by assurance or tangible proof.

Keywords: Reliability, responsiveness, assurance, empathy, tangibles, patient satisfaction, public health center

1. Introduction

A public health center is a healthcare facility that is owned and operated by the government with the purpose of providing medical services and treatment to the community. It acts as the first point of contact for those looking for medical care and is crucial in advancing public health and wellbeing. The service units available at the public health center are outpatient, inpatient, health service installations with national standard facilities. In both manufacturing and service industries, the provision of high-quality products has become a necessity for companies to remain competitive and sustain their position in the market [1], [2]. Meeting customer expectations and delivering products of superior quality has become crucial for companies to thrive in a competitive business environment. Customers increasingly demand and value products that are reliable, durable, and meet their needs effectively. Therefore, companies must prioritize and focus on delivering quality products to gain a competitive edge and maintain customer satisfaction. The increase in purchasing power without the support of mature consumers who are both culturally and knowledgeable, makes their demand for product quality increase. The concept of quality is very broad in scope. Various

experts provide definitions and shape it in different dimensions. [3] identifies value, compliance to a given standard or criteria, as well as benefit appropriateness, as qualities. Quality is something that satisfies consumers so that every effort to develop quality must start from understanding the perceptions and needs of consumers who need that quality [4], [5]. The quality of service can be defined as the extent to which the actual experience of customers aligns with their expectations. If the service provided exceeds customer expectations, it can be considered as excellent. On the other hand, if the service falls short of customer expectations, it can be deemed as subpar. The perception of service quality is shaped by the gap between what customers anticipate and what is actually delivered. By consistently meeting or surpassing customer expectations, organizations can enhance their reputation and build customer loyalty. When the actual service matches the expected service, it can be considered as good. In the context of good service quality, customers are likely to have a positive experience and feel satisfied with the service received. This satisfaction, in turn, increases the likelihood of repeat patronage by customers. Consistently delivering good service quality builds customer trust, loyalty, and positive word-of-mouth, which can lead to long-term customer relationships and business success.

According to [6], customer satisfaction refers to an individual's emotional state of contentment or disappointment with a product or service. This evaluation is made by comparing the actual performance or outcomes of the product with the customer's initial expectations. When the product's performance meets or exceeds the customer's expectations, it indicates that the customer is satisfied with their purchase or experience. On the other hand, if the product's performance falls short of expectations, it may result in customer dissatisfaction. Customers are more likely to make repeat purchases and use positive word-of-mouth marketing when they are happy with the goods or services they receive. Satisfaction can be understood as the fulfillment or adequacy of something. According to [6]–[8], satisfaction is the customer's response to having their needs fulfilled. In other words, it is the customer's perception that their expectations have been met or exceeded, resulting in a positive evaluation of their overall experience with the product or service. Consumer satisfaction is a useful benchmark for assessing the effectiveness of public health facilities. As healthcare institutions that rely on significant capital and human resources, public health centers can benefit from establishing a strong corporate culture. The effective and efficient use of resources, particularly human resources, and the happiness of the center's service users are two key components of a public health center's success. By prioritizing resource optimization and prioritizing the satisfaction of service users, public health centers can improve their overall performance and enhance the quality of healthcare services they provide.

Empirical studies on the services of health institutions have been carried out. Research on service quality and consumer satisfaction, customer satisfaction was found to be significantly impacted by every aspect of service quality [1], [2], [9]. This suggests that a number of service quality factors, including dependability, responsiveness, assurance, empathy, and tangibles, were discovered to have an impact on the degree of customer satisfaction. The findings suggest that organizations should focus on improving and maintaining high service quality standards across these dimensions to enhance customer satisfaction levels. In addition, a similar study was conducted by [2] on the effect of service quality on outpatient satisfaction and WOM. Customer happiness is positively impacted by service quality. [3], [5], [10]–[12] stated that consumers are less satisfied with service quality due to greater consumer expectations than company performance. Companies must improve the quality of the services they provide to clients because better services can influence

customers' behavior in ways that are advantageous to the business. Companies must improve the quality of the services they provide to clients because better services can influence customers' behavior in ways that are advantageous to the business. The purpose of this study is to investigate the relationships between patient satisfaction, dependability, responsiveness, assurance, and tangibles. By investigating these relationships, researchers seek to understand how these service quality dimensions impact the level of patient satisfaction. This analysis can provide valuable insights for companies to improve their services and enhance customer satisfaction, ultimately leading to positive consumer behavior and organizational success.

2. Literature Review

[11], [12] state that customer loyalty belongs to a core goal that marketers strive for in retaining and increasing customers. This is because with loyalty as expected, it will certainly provide benefits now and in the future. In the long term, customer loyalty becomes a goal for strategic planning as the basis for developing a sustainable competitive advantage. The concept of customer loyalty is not formed for a moment, this requires a process based on the customer's consistent buying experience and of course this is not easy for manufacturers or shop or minimarket owners, it takes work. hard because of the high level of competition and the ease with which customers move. Consumers as kings will compare and look for places to shop according to their wishes so that it is not impossible for them to move from place to place. According to [3], [10], customers who are happy with a firm are more inclined to stick with them, make larger purchases from them, and refer them to others. They may also be less sensitive to price and provide valuable feedback and ideas to the company. Satisfaction is influenced by dimensions of service quality, as stated. According to [4], [5], the five dimensions of service quality, in order of importance, are as follows:

1. Reliability: This refers to the ability to consistently deliver promised services accurately and dependably.
2. Responsiveness: This dimension reflects the willingness to promptly assist and provide services to customers.
3. Assurance: It involves instilling confidence in customers through knowledgeable and trustworthy employees, as well as fostering confidence in the company's offerings.
4. Empathy: This dimension focuses on demonstrating attentiveness and personalized attention towards customers, understanding their individual needs and concerns.
5. Tangibles: This aspect relates to the tangible proof of the service interaction, including the appearance of facilities, equipment, personnel, and communication materials, such as office buildings, employee attire, service equipment, and overall appearance of employees.

These dimensions collectively contribute to the assessment of service quality and play a crucial role in shaping customers' perceptions and experiences with a company's services.

2.1 Relationship of Tangible and Customer Loyalty

The physical components of service facilities, equipment, human resources, and corporate communication materials are included in the tangible dimension of service excellence [5]. These tangible elements directly influence the indicators of customer loyalty. When customers perceive

high-quality tangible attributes, such as well-maintained facilities, modern equipment, professional-looking staff, and effective communication materials, it enhances their overall experience and fosters a sense of trust and loyalty towards the company. Tangible factors contribute significantly to customer satisfaction and their willingness to continue patronizing the company's products or services.

2.2 Relationship of Empathy and Customer Loyalty

According to [3], [10], empathy is the ability of a corporation to perceive the problems of its clients and take actions that prioritize their interests. This positive approach directly impacts various aspects of customer loyalty, such as consistently selecting the brand, endorsing it to others, and engaging in repeat purchases.

2.3 Relationship of Reliability and Customer Loyalty

According to [5], [11], indicators of reliability consist of work consistency and trustworthiness which directly have a favorable impact on the customer loyalty dimension, namely stating positive things, giving recommendations to others and making continuous purchases.

2.4 Relationship of Responsiveness and Loyalty

According to the immediacy and willingness of employees to assist and serve customers, known as responsiveness, directly and positively impact customer loyalty. This is because it adds extra value by motivating customers to form long-term, mutually beneficial relationships. This strong connection fosters customer loyalty.

2.5 Relationship of Assurance and Customer Loyalty

According to [3], [11], [12], the assurance of employee's expertise and their ability to instill confidence in customers positively contributes to the development of customer loyalty. When customers feel assured about the knowledge and competence of employees, it strengthens their trust and builds a sense of confidence, ultimately fostering customer loyalty. Because customers feel understood and finally feel comfortable so that makes these customers become loyal. Customer loyalty is significantly impacted by service quality, according to previous studies. The findings indicate that when customers perceive a high level of service quality, it positively influences their loyalty towards a company or brand. According to [3], [11], [12], significant correlations between service quality, customer satisfaction, and customer loyalty have been found by researchers. The results show that service quality has a significant impact on both customer loyalty and satisfaction. This implies that when service quality is high, it leads to increased customer satisfaction, which in turn plays a crucial role in fostering customer loyalty.

3. Research Method

This study was carried out in an Indonesian hospital using a quantitative research methodology. 370 hospital owners made up the sample, which was chosen using a straightforward random sampling method. Online questionnaires that were disseminated through social media platforms were used for data gathering. A Likert scale with a range of 1 to 7 was used as the measurement scale in this investigation. SEM, or structural equation modeling, was used to analyze the data, and SmartPLS was used to handle the data. The dependent variable of interest in this study was Patient Satisfaction, and the independent factors comprised Empathy, Reliability, Responsiveness, Assurance, and Tangibles. The hypotheses of this study are:

H1: Patient satisfaction is positively and significantly impacted by empathy.

H2: Patient satisfaction is positively and significantly impacted by reliability.

H3: Patient satisfaction is positively and significantly impacted by responsiveness.

H4: Patient satisfaction is positively and significantly impacted by assurance.

H5: Tangibles significantly and favorably affect patient satisfaction.

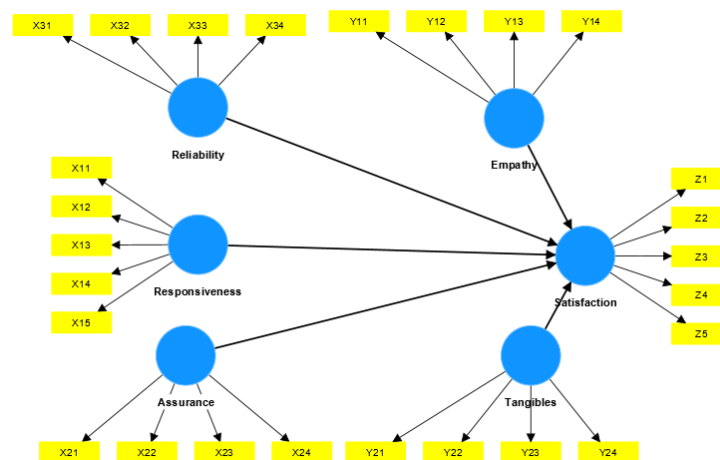


Fig 1. Research Model

4. Result and Discussion

4.1 Validity Converging

It is clear from the data in Figure 1 that all of the study variable indicators have outer loading values larger than 0.7. The outer loading value of none of the indicator variables is less than 0.7. This shows that every indicator is thought to be reliable and appropriate for use in the study. These indicators can be utilized for further analysis and investigation.

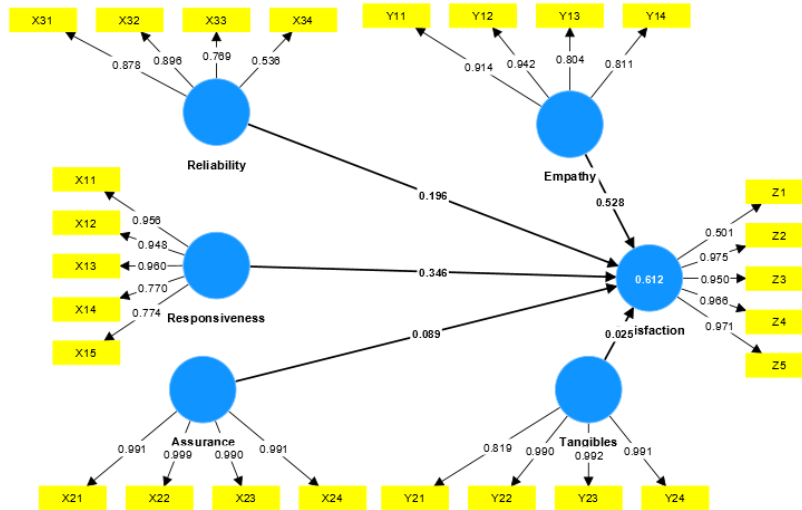


Fig 2. Loading Factors

4.2 Discriminant Validity

It can be seen from the data in Table 1 that all variables have an Average Variance Extracted (AVE) value greater than 0.5. This suggests that the discriminant validity of each variable is strong. A high level of dependability is also indicated by the fact that the composite reliability values for all research variables are all more than 0.7.

Additionally, each research variable has a Cronbach's alpha value greater than 0.7. This suggests that all variables are very reliable because they all match the criteria for Cronbach's alpha value.

In conclusion, the data analysis findings show that all variables have high levels of composite reliability, good discriminant validity, and satisfy Cronbach's alpha requirements.

Table 1. Reliability Testing

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
emphaty	0.812	0.852	0.776	0.65e
reliability	0.856	0.812	0.813	0.612
responsiveness	0.838	0.876	0.709	0.698
assurance,	0.887	0.843	0.767	0.665
tangibles	0.832	0.817	0.876	0.609
patient satisfaction	0.876	0.809	0.881	0.602

4.3 Coefficient of Determination

Table 2. R Square

	R Square	R Square Adjusted
Patient Satisfaction	0.612	0.609

Considering the information in Table 2, the R Square value for the Patient Satisfaction variable is 0.623. This number shows that the study’s factors for empathy, reliability, responsiveness, assurance, and tangibles may account for about 61.2 percent of the difference in patient satisfaction. The remaining 38.8% of the variation in Patient Satisfaction is attributed to other factors that were not investigated or discussed in this study.

4.4 Hypothesis Testing

In this study, the T-Statistics value and accompanying P-Values were examined as part of the hypothesis testing process. If the P-Values are less than 0.05, the research hypotheses are considered to be valid. This significance level of 0.05 is commonly used in hypothesis testing to determine whether the results are statistically significant. The research hypotheses are accepted if the P-Values are less than 0.05, which indicates that there is a statistically significant effect or relationship between the variables under investigation.

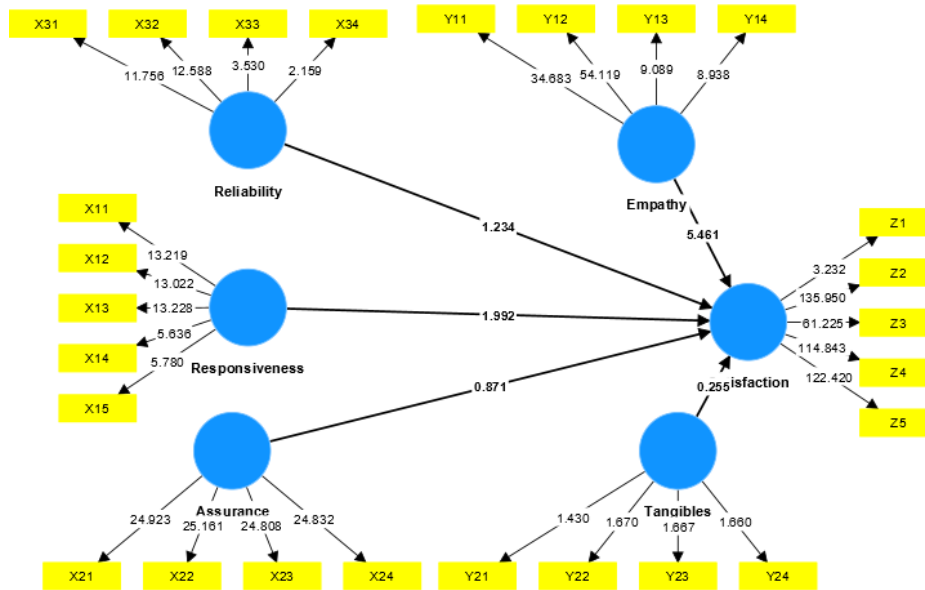


Fig 3. Hypothesis testing

Table 3. Hypothesis testing

Hypothesis	T Statistics	P Values	Result
Empathy-> Patient Satisfaction	5.461	0.000	Supported
Reliability ->Patient Satisfaction	1.234	0.087	Not Supported
Responsiveness -> Patient Satisfaction	1.992	0.035	Supported
Assurance -> Patient Satisfaction	0.871	0.341	Not Supported
Tangibles -> Patient Satisfaction	0.255	0.098	Not Supported

4.4.1 The Relationship of Empathy and Patient Satisfaction

The T-value for empathy was found to be 5.461 based on the findings of hypothesis testing, which is higher than the critical value of 1.96. This suggests that empathy affects patient satisfaction in a favorable and statistically significant way. The T-value exceeding the critical value suggests that the relationship between empathy and patient satisfaction is unlikely to have occurred by chance and is indeed significant. Therefore, it can be argued that empathy has a positive and significant impact on patient satisfaction based on the findings of the hypothesis testing. This result is in accordance with [13]–[15].

4.4.2 The Relationship of Reliability and Patient Satisfaction

The T-value for reliability was found to be 1.234, which is less than the critical value of 1.96, based on the findings of hypothesis testing. This shows that patient satisfaction is not much impacted by reliability. Because the T-value is below the threshold, there is no statistically meaningful correlation between reliability and patient satisfaction. Therefore, it can be deduced from the findings of the hypothesis testing that reliability does not significantly affect patient satisfaction in the setting of this study. This result is in accordance with [3], [10], [12].

4.4.3 The Relationship of Responsiveness and Patient Satisfaction

Based on the findings of hypothesis testing, it was determined that responsiveness has a positive and significant impact on patient satisfaction and that the T value was $1.992 > 1.96$. This result is in accordance with [10], [12], [15]

4.4.4 The Relationship of Assurance and Patient Satisfaction

The T-value for assurance, which was determined using the results of hypothesis testing, is 0.871, which is lower than the critical threshold of 1.96. This suggests that patient happiness is not significantly impacted by assurance. The fact that the T-value is below the threshold value shows that there is no statistically meaningful association between assurance and patient satisfaction. Therefore, it can be deduced from the findings of the hypothesis testing that assurance does not significantly affect patient satisfaction in the context of this study. This result is in accordance with [10], [12], [15]

4.4.5 The Relationship of Tangibles and Patient Satisfaction

The T-value for tangibles was determined to be 0.255 based on the findings of hypothesis testing, which is lower than the critical value of 1.96. This suggests that tangibles have little impact on patients' pleasure. The fact that the T-value is below the threshold shows that there is no statistically significant correlation between tangibles and patient happiness. As a result, it can be said based on the results of the hypothesis testing that tangibles do not significantly affect patient satisfaction in the context of this study. This result is in accordance [2], [3], [10], [12]

The results of this study are in line with the findings of [5], [8] that direct evidence, certainty, reliability, responsiveness, and empathy all have a good and considerable impact on customer satisfaction. The results suggest that these factors play a crucial role in influencing and enhancing customer satisfaction. The findings of this study are consistent with those of [6], [7] that show a direct correlation between the factors of reliability, responsiveness, assurance, and empathy on customer satisfaction that is favorable and significant. These findings indicate that these factors have a notable impact on shaping and influencing consumer satisfaction. This consumer satisfaction is realized through: 1) Eligibility of vehicles providing services; 2) Cleanliness of the driving equipment provided; and 3) Using the identity of the company. This makes consumers interested in using it again and even recommending others to use it as well.

According to [16], the characteristics of dependability, responsiveness, assurance, empathy, and tangibles are taken into account while evaluating service quality. The study's conclusions show that patient satisfaction is significantly impacted by service quality. Satisfaction, being an emotional concept, can influence how services are evaluated. The assessment of service quality triggers an emotional evaluation of satisfaction. It is crucial for companies to deliver services that meet customer satisfaction because when customers are satisfied with the services they receive, it enables the company to establish strong and profitable relationships. The positive relationship between service quality and satisfaction is extensively supported in both theoretical and empirical marketing literature. Reliability plays a significant role in enhancing outpatient satisfaction at public health centers [6]. Reliability refers to the institution's ability to consistently deliver appropriate and dependable services. In this context, it ensures that patients experience consistent adherence to appointment schedules and efficient handling of their time. When patients consistently perceive reliability in the services provided, it leads to higher levels of satisfaction among the community they serve.

According to the analysis's findings, responsiveness has no appreciable impact on patient satisfaction. This indicates that the level of responsiveness displayed by the healthcare facility or staff has little to no bearing on the level of satisfaction as a whole that patients report. According to [1]–[3], [9], [10], [12], responsiveness concerns the willingness and readiness of service companies to provide services and provide fast service. The data and interview results obtained are indeed many patients complain about the lack of readiness of officers/nurses and doctors in providing services. This is possible because of various gaps, including the perception gap in service quality that may cause dissatisfaction for service recipients which results in disloyalty

The partial effect of empathy is also not significant. This includes the ease of making contact, the ease of communication levels, and the value of the officer's understanding of customer needs. According to [5]–[8], patients feel that the staff at public health centers don't comprehend how they're feeling. The tangible components of a service, also referred to as the physical aspects, barely

affect patient happiness. Tangibles include the service's outward appearance, which must be consistent with the promises offered to clients. This suggests that the Public Health Center's overall physical presentation falls short of patient expectations.

However, it is clear that there is a considerable overall influence when taking into account all the independent factors (reliability, responsiveness, assurance, empathy, and tangibles) in relation to the dependent variable of outpatient satisfaction at a public health facility. In other words, these factors significantly affect outpatient satisfaction when they are combined.

However, upon examining each variable individually, it is found that responsiveness, assurance, empathy, and tangibles do not exert a significant effect on outpatient satisfaction. Only the reliability variable partially influences outpatient satisfaction at a public health center.

In conclusion, while tangibles have a little effect on patient satisfaction, responsiveness, reliability, assurance, empathy, and tangibles together have a considerable impact on outpatient satisfaction at a public health center. Specifically, reliability demonstrates a partial and significant influence on patient satisfaction, while the other variables do not exhibit a significant individual impact.

5. Conclusion

These inferences can be made of the outcomes of hypothesis testing: (1) patient satisfaction is significantly and favorably impacted by empathy; (2) patient satisfaction is not much impacted by reliability; (3) patient satisfaction is significantly and favorably impacted by responsiveness; (4) patient satisfaction is not much impacted by assurance; and (5) patient satisfaction is not much impacted by tangible or physical evidence.

The authors offer the following advice for public health facilities in light of their findings. First, leaders of public health centers should focus on improving the variables of responsiveness, assurance, empathy, and tangibles. By enhancing these aspects, public health centers can achieve optimal service quality, which in turn will lead to higher levels of outpatient satisfaction. Second, the leadership of public health centers should also pay attention to maintaining and potentially improving the reliability factor. This will help ensure that patients are satisfied with the services provided and foster a sense of loyalty towards the public health center.

By implementing these recommendations, public health facilities can raise the overall quality of their services and successfully satisfy the demands and expectations of their patients, resulting in increased patient satisfaction and loyalty.

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