

## Islamic Service Quality and Patient Loyalty: Investigating the Role of Satisfaction in Healthcare Contexts

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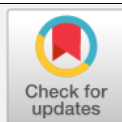
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### ARTICLE INFO

#### Publication Info:

Research Article



#### How to cite:

Widiastuti, W., Indartono, S., & Sa'adah, N. (2024). Islamic Service Quality and Patient Loyalty: Investigating the Role of Satisfaction in Healthcare Contexts. *Society*, 12(2), 538-555.

DOI: [10.33019/society.v12i2.723](https://doi.org/10.33019/society.v12i2.723)

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Received: December 3, 2024;  
Accepted: December 11, 2024;  
Published: December 14, 2024;

### ABSTRACT

*This study examines the mediating role of patient satisfaction in the relationship between Islamic service quality and patient loyalty at the General Hospital of Welfare Development Unit Muhammadiyah Bantul (Rumah Sakit Umum Pembina Kesejahteraan Umat Muhammadiyah Bantul), addressing concerns over declining patient visits. Using a survey of 150 respondents and Partial Least Squares-Structural Equation Modeling (PLS-SEM), the results indicate that tangible dimensions of Islamic service quality do not significantly affect satisfaction or loyalty. However, reliability, responsiveness, assurance, and empathy positively and significantly influence both outcomes. Patient satisfaction does not mediate these effects, suggesting that patients directly value the integration of Islamic principles in service delivery. These findings emphasize the critical role of culturally aligned healthcare services in building trust and loyalty, offering insights for policymakers and healthcare practitioners to develop inclusive and patient-centered service strategies aligned with societal and religious values.*

**Keywords:** Healthcare Policy; Islamic Service Quality; Patient Loyalty; Patient Satisfaction; PLS-SEM; Sociocultural Healthcare Practices

## 1. Introduction

Between 2010 and 2020, Indonesia experienced a remarkable expansion in its hospital sector, with the total number of facilities increasing by 80%, from 1,632 to 2,943. This growth was particularly pronounced among private hospitals, which saw a staggering 92% increase, rising from 990 to 1,900 facilities. In comparison, government hospitals grew by 39%, increasing from 751 to 1,043. Such growth underscores the rapid privatization and diversification of healthcare services in Indonesia, reflecting both rising demand for healthcare and a shift toward market-driven models.

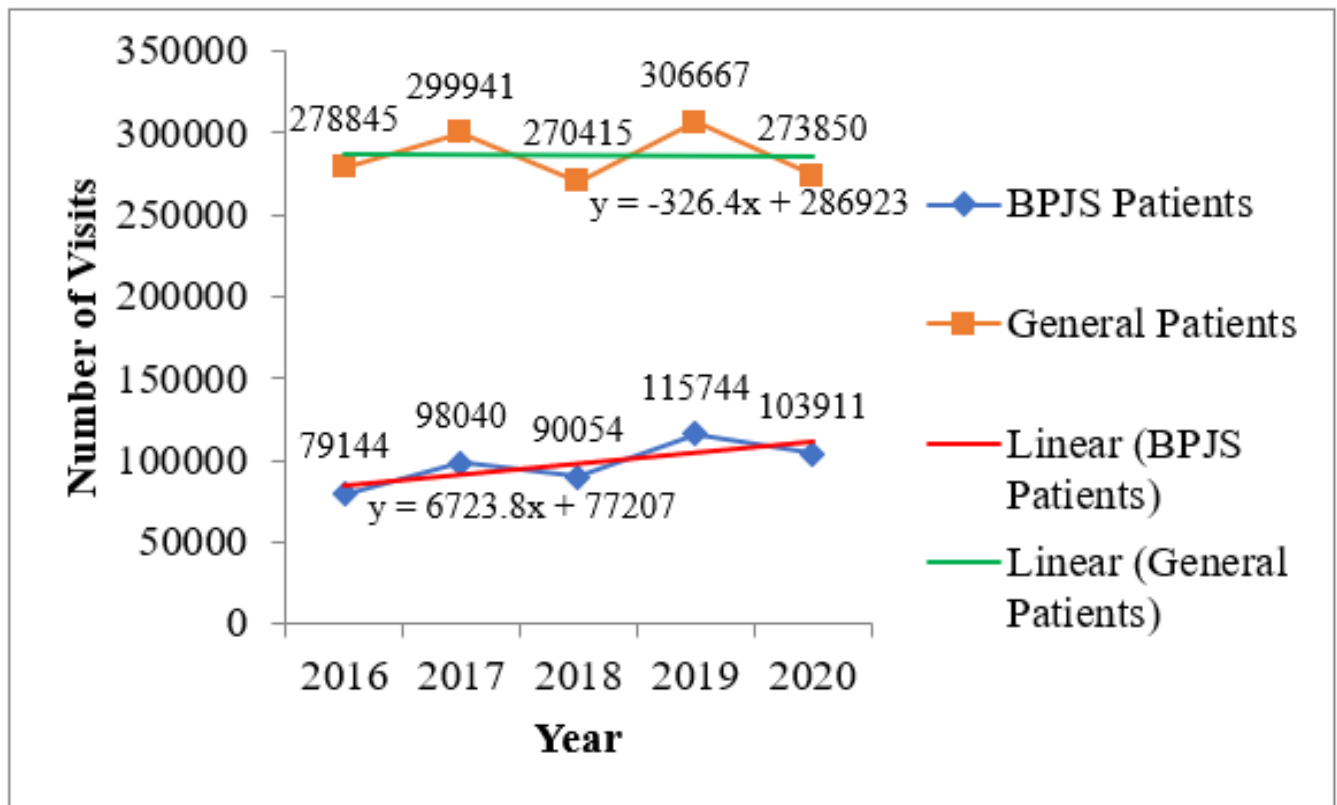
The majority of these hospitals, approximately 82%, are general hospitals, offering a wide range of services to cater to various medical needs. Meanwhile, specialty hospitals have carved out a significant niche, with facilities dedicated to maternity and child care comprising 67% of this category. These trends highlight the evolving healthcare landscape, where specialization and focused services are becoming integral to meeting the population's diverse healthcare demands.

The rapid increase in hospital numbers has inevitably led to heightened competition among providers, particularly in the private sector. To remain competitive, hospitals must adopt innovative strategies to attract and retain patients. This includes not only providing quality healthcare services but also focusing on elements such as branding, patient experience, and customer relationship management. For private hospitals, in particular, these strategies are vital to maintaining financial viability in a competitive environment.

In this context, customer loyalty emerges as a critical success factor. Loyal patients bring numerous benefits to healthcare providers. They tend to utilize services more frequently, explore new offerings, and become advocates for the hospital by recommending it to family and friends. Additionally, their constructive feedback can serve as a valuable resource for improving service quality and meeting patient expectations. As Khan emphasizes, customer loyalty is not just a byproduct of satisfaction; it is a strategic asset that contributes to a hospital's long-term sustainability and growth (Khan, 2013).

Islamic service quality extends beyond individual patient satisfaction to impact broader social dynamics, particularly in fostering trust within communities (Putra & Herianingrum, 2014). In healthcare settings, services aligned with Islamic values not only ensure compliance with ethical and spiritual principles but also address the diverse needs of patients from varying socio-economic backgrounds (Mohezar et al., 2017). This inclusivity promotes equitable access to care by creating a culturally sensitive environment where all patients, regardless of their social standing, feel respected and valued. Furthermore, the consistent practice of Islamic principles, such as empathy and assurance, strengthens societal trust in healthcare institutions, positioning them as reliable pillars of support within the community (Ratnawati et al., 2020; Suhail & Srinivasulu, 2021).

The number of patient visits serves as a crucial indicator of patient loyalty within healthcare institutions. A decline in visits often reflects diminishing loyalty, signaling the need for hospital management to take proactive measures to enhance patient satisfaction and retention. This trend is evident at the General Hospital of Welfare Development Unit Muhammadiyah Bantul, where the number of visits to outpatient installations has fluctuated significantly over recent years, as illustrated in Figure 1.



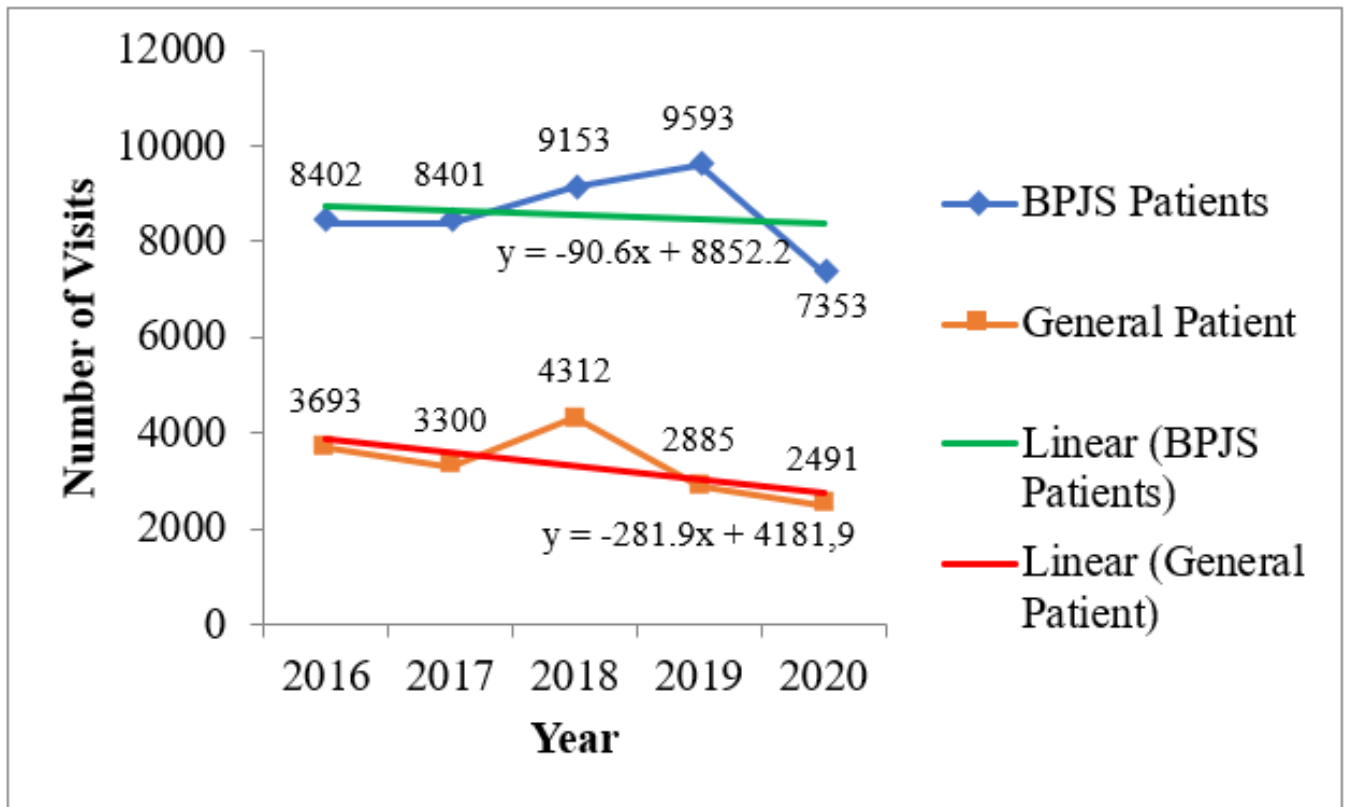
**Figure 1. Number of Outpatient Visits at General Hospital of Welfare Development Unit Muhammadiyah Bantul 2016 – 2020**

**Figure 1** reveals distinct patterns for BPJS patients and general patients. BPJS (Indonesia's Social Security Administering Body for Healthcare) patients showed a notable increase of 28.53%, rising from 90,054 in 2018 to a peak of 115,744 in 2019. However, this growth was followed by a decline of 10.22%, with visits dropping to 103,911 in 2020. Despite this decline, the linear trend for BPJS patients indicates a consistent upward trajectory over the observed period, suggesting a gradual increase in reliance on BPJS-covered services.

In contrast, general patient visits followed a different trajectory. From 270,415 visits in 2018, the number increased by 13.53% to reach 306,667 in 2019. However, similar to BPJS patients, general patient visits dropped by 10.70% in 2020, falling to 273,850. Unlike the upward trend seen in BPJS patient visits, the linear trend for general patients exhibits a gradual decline, reflecting potential challenges in retaining this patient group.

These contrasting trends underscore the complex dynamics of patient loyalty at the General Hospital of Welfare Development Unit Muhammadiyah Bantul. While BPJS patients show a growing inclination toward outpatient services, general patients appear to be less consistent, potentially due to external factors such as financial constraints, service quality perceptions, or increased competition from other healthcare providers. Addressing these trends requires tailored strategies that cater to the distinct needs of both patient groups, ensuring sustainable growth in patient loyalty and satisfaction.

The decline in patient visits to the inpatient installations at the General Hospital of Welfare Development Unit Muhammadiyah Bantul provides significant insights into patient loyalty and service utilization trends. As illustrated in **Figure 2**, both BPJS and general inpatient visits have shown considerable fluctuations over the 2016–2020 period, with a pronounced downward trend in recent years.



**Figure 2. Number of Inpatient Visits at General Hospital of Welfare Development Unit Muhammadiyah Bantul 2016 – 2020**

The data reveal that inpatient visits by BPJS patients initially increased by 4.81%, climbing from 9,153 in 2018 to a peak of 9,593 in 2019. However, this growth was followed by a sharp decline of 23.35%, dropping to 7,353 visits in 2020. The linear trend line for BPJS patient visits reflects an overall gradual decrease across the observed years, highlighting challenges in sustaining this patient segment's engagement with inpatient services.

General inpatient visits have exhibited a more pronounced decline. After a modest increase from 3,693 visits in 2016 to 4,312 in 2018 (an overall growth of 16.76%), the number fell by 33.09% to 2,885 in 2019. This decline continued into 2020, with visits dropping by a further 13.66% to 2,491. The linear trend for general inpatient visits similarly underscores a consistent downward trajectory, suggesting broader systemic or service-related challenges affecting this patient group.

These trends raise critical concerns for hospital management. While BPJS patient visits reflect a slight initial growth before declining, general patient visits consistently decrease, pointing to potential issues in service delivery, competition, or patient satisfaction. Addressing these challenges requires targeted interventions, such as improving service quality, tailoring inpatient services to meet patient expectations, and strengthening marketing efforts to retain both BPJS and general patients. Without such measures, the declining trend in inpatient visits may continue, affecting hospital sustainability and overall patient loyalty.

As a hospital with an Islamic nuance, in order to increase patient visits and loyalty, it is important to improve the quality of Islamic services. From an Islamic perspective, service quality is understood as a cognitive assessment of consumers towards the way services are delivered, which is based on moral values in accordance with Islamic law (Putra & Herianingrum, 2014). Basically, the essence of Islamic service is "halal." The term "halal" in



Arabic means something permissible according to sharia law or Islamic teachings. This concept covers various aspects of the daily life of Muslims, not limited to food and drink but also includes health activities (Mohezar et al., 2017). Customers usually build a mindset towards purchasing based on previous service experiences. Positive perceptions of service quality can build customer loyalty by providing positive feedback, recommending hospitals, committing not to move to other hospitals, and being willing to pay more (Fatima et al., 2018).

Quality of service in hospitals affects patient satisfaction. Juhana et al. (2015) stated that there is a significant relationship between service quality and patient satisfaction. Good service helps build long-term relationships between patients and hospitals, allowing hospitals to understand patient needs better. This allows hospitals to improve patient satisfaction by optimizing positive experiences and reducing negative experiences (Fatima et al., 2018). Service quality is very important for patient satisfaction and loyalty, so the management of the General Hospital of Welfare Development Unit Muhammadiyah Bantul must consider it.

Patient loyalty will also arise if the patient is satisfied with the service at the hospital. Patient satisfaction can directly increase loyalty (Fatima et al., 2018). Satisfaction will cause patients to recommend the hospital to others, perform services again, and provide positive reviews (Fatima et al., 2018).

## 2. Literature Review

Customers often determine their purchasing patterns based on their previous service experiences. They also tend to develop attitudes about whether to continue using or discontinue the service (Fatima et al., 2018). This view suggests that patients' experiences in a hospital will influence their decision to return to health services there. Suppose the hospital's services are considered to be of high quality, especially if they are in accordance with Islamic service standards. In that case, patients will tend to have the intention to return if they need health services, which in turn can build loyalty to the hospital.

Numerous studies have consistently highlighted the significant influence of service quality on patient satisfaction and loyalty in healthcare settings. For instance, research by Jandavath and Anand demonstrated that the dimensions of tangibility, responsiveness, assurance, and empathy all contribute positively to patient satisfaction, emphasizing the multifaceted nature of quality in healthcare services (Jandavath & Anand, 2016). Similarly, Meesala and Paul identified reliability and responsiveness as critical drivers of patient satisfaction, underlining the importance of consistent and prompt service delivery in fostering positive patient experiences (Meesala & Paul, 2016).

Further supporting this, Zahlimar et al. and Suhail and Srinivasulu established that reliability and empathy are pivotal in shaping patient satisfaction, indicating that patients value dependable service and a sense of personalized care from healthcare providers (Suhail & Srinivasulu, 2021; Zahlimar et al., 2020). Ratnawati et al. echoed these findings, confirming the positive impact of reliability and empathy on patient satisfaction (Ratnawati et al., 2020). Additionally, Budiharto focused on the dimensions of responsiveness and empathy, highlighting their combined role in enhancing the overall satisfaction of patients (Budiharto, 2019).

Building on these insights, this study posits that Islamic service quality, which integrates both technical and spiritual dimensions of care, plays a critical role in fostering patient loyalty. Based on the literature, the following hypotheses are formulated to examine the influence of specific dimensions of Islamic service quality on patient loyalty at the General Hospital of Welfare Development Unit Muhammadiyah Bantul:

- H1: The quality of Islamic service in the tangible dimension has a positive effect on patient loyalty.
- H2: The quality of Islamic service in the reliability dimension has a positive effect on patient loyalty.
- H3: The quality of Islamic service in the responsiveness dimension has a positive effect on patient loyalty.
- H4: The quality of Islamic service in the assurance dimension has a positive effect on patient loyalty.
- H5: The quality of Islamic service in the empathy dimension has a positive effect on patient loyalty.

Service quality is a key factor influencing patient satisfaction in hospitals. Customer satisfaction is an important indicator of service quality, as it reflects how well the service provider meets the values and expectations of the client, as assessed by the clients themselves. Therefore, measuring customer satisfaction is essential for research, administration, and planning. This shows that the quality of service provided by hospitals has a direct impact on patient satisfaction (Papanikolaou & Ntani, 2008).

For Muslims, services that are in accordance with Islamic law principles will be positively received by patients. The quality of Islamic services involves not only the provision of Islamic-themed hospital facilities but also medical attitudes and ethics that are in accordance with Islamic teachings. Services that are carried out in a polite, gentle, and caring manner will be considered as worship so that it can increase patient satisfaction with the services provided.

Extensive research has consistently demonstrated the critical role of service quality in shaping patient satisfaction in healthcare settings. Meesala and Paul identified reliability—the hospital's ability to deliver consistent and dependable services—and responsiveness, or the promptness of the healthcare team in addressing patient needs, as key contributors to positive patient experiences and satisfaction (Meesala & Paul, 2016). Their findings underscore the importance of operational efficiency and trustworthiness in building patient satisfaction.

Suhail and Srinivasulu expanded this understanding by adding the assurance dimension, which refers to the competence, courtesy, and credibility of healthcare providers as another significant factor positively influencing patient satisfaction (Suhail & Srinivasulu, 2021). This dimension highlights the need for healthcare providers to instill confidence in patients through professional behavior, skill, and ethical practices. Together, reliability, responsiveness, and assurance form a robust framework for evaluating how service delivery impacts patient perceptions and satisfaction.

Ratnawati et al. emphasized the significance of empathy in patient care, focusing on the ability of healthcare providers to offer personalized and compassionate service (Ratnawati et al., 2020). Their study, which also confirmed the importance of reliability, demonstrates that empathy fosters emotional connections between patients and healthcare providers, enhancing overall satisfaction with healthcare services.

Based on these insights and the need to evaluate the influence of Islamic service quality in a healthcare setting, the following hypotheses are proposed to assess its effect on patient satisfaction at the General Hospital of Welfare Development Unit Muhammadiyah Bantul:

- H6: The quality of Islamic services in the tangible dimension has a positive effect on patient satisfaction.
- H7: The quality of Islamic services in the reliability dimension has a positive effect on patient satisfaction.

- H8: The quality of Islamic services in the responsiveness dimension has a positive effect on patient satisfaction.
- H9: The quality of Islamic services in the assurance dimension has a positive effect on patient satisfaction.
- H10: The quality of Islamic services in the empathy dimension has a positive effect on patient satisfaction.

Harjanti et al., in their research, found that positive experiences can increase patient satisfaction. Patients who are satisfied with the quality of hospital services will usually develop loyalty to the hospital (Harjanti et al., 2020). The positive influence of satisfaction on patient loyalty is proven by other previous research (Fitriani et al., 2020; Juhana et al., 2015; Meesala & Paul, 2016; Phonthanakitithaworn et al., 2020; Ratnawati et al., 2020).

Based on the description above, the following hypothesis can be determined:

- H11: Patient satisfaction has a positive effect on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.

Patient satisfaction will mediate the influence of Islamic service quality on patient loyalty. Good service quality will lead to patient satisfaction and ultimately will increase patient loyalty. This is also supported by previous research (Asnawi et al., 2019; Hartono, 2018; Risal, 2019; Sumertana, 2016). Based on the description above, the following hypothesis can be determined:

- H12: Patient satisfaction mediates the influence of Islamic service quality in the tangible dimension on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.
- H13: Patient satisfaction mediates the influence of Islamic service quality in the reliability dimension on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.
- H14: Patient satisfaction mediates the influence of Islamic service quality in the responsiveness dimension on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.
- H15: Patient satisfaction mediates the influence of Islamic service quality in the assurance dimension on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.
- H16: Patient satisfaction mediates the influence of Islamic service quality in the empathy dimension on patient loyalty at General Hospital of Welfare Development Unit Muhammadiyah Bantul.

### 3. Research Methodology

This study employs a causal research design, which is aimed at investigating cause-and-effect relationships between variables. According to Silalahi, causal research is particularly useful for exploring how changes in one variable influence another within a defined system (Silalahi, 2018). In this study, the population consists of patients receiving care at the Inpatient Installation of General Hospital of Welfare Development Unit Muhammadiyah Bantul, providing a focused context for understanding patient experiences. A total of 150 respondents were selected through purposive sampling, a non-probability sampling technique that allows researchers to choose participants based on specific criteria relevant to the study's objectives (Sugiyono, 2016). This method ensures the inclusion of individuals whose experiences align closely with the research questions.

Data collection was conducted through a structured questionnaire meticulously designed to capture the nuances of Islamic service quality, patient satisfaction, and loyalty. The dimensions of Islamic service quality – tangibles, reliability, responsiveness, assurance, and empathy – were measured using a specifically adapted questionnaire for this study (Azman et al., 2019). Patient satisfaction was measured with a modified version of the Patient Satisfaction Questionnaire (PSQ-18), originally developed for healthcare studies (Imaninda & Azwar, 2016). Patient loyalty, in turn, was assessed using a tool designed to reflect the Islamic service framework and healthcare context (Tosyal et al., 2019).

To analyze the collected data, the study utilized Partial Least Squares-Structural Equation Modeling (PLS-SEM). This statistical technique is particularly suited for research involving complex models with multiple variables, especially when the data may not meet normal distribution requirements or when sample sizes are relatively small (Ghozali, 2021). PLS-SEM integrates two main components: the structural model (inner model), which examines the relationships between latent constructs, and the measurement model (outer model), which assesses how well indicators represent their corresponding constructs (Hair et al., 2014).

The outer model was evaluated for validity and reliability. Convergent validity ensures that indicators related to the same construct are highly correlated, which was tested through outer loading values and Average Variance Extracted (AVE). Indicators with outer loading values above 0.7 and AVE values greater than 0.50 are considered acceptable, indicating that at least 50% of the variance is explained by the construct (Hair et al., 2021). Furthermore, discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT), where values below 0.90 confirm that constructs are distinct from one another (Ghozali, 2021; Kline, 2016).

Reliability testing was conducted to ensure the consistency and precision of the measurement tools. Both Cronbach's Alpha and Composite Reliability were calculated, with thresholds of 0.80 or higher indicating a highly reliable scale, 0.70 considered acceptable, and 0.60 appropriate for exploratory studies (Garson, 2016). These measures validate the robustness of the instruments used to capture patient perceptions of Islamic service quality, satisfaction, and loyalty.

The inner model evaluation aimed to assess the predictive power of the structural relationships. The coefficient of determination ( $R^2$ ) was calculated to measure the combined impact of exogenous variables on the endogenous constructs.  $R^2$  values are categorized as strong (above 0.67), moderate (above 0.33), or weak (above 0.19) (Garson, 2016). In addition, effect size ( $f^2$ ) analysis was performed to quantify the contribution of each independent variable to the dependent variable. Effect sizes of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively, helping to determine the substantive impact of the variables (Ghozali, 2021; Hair et al., 2014).

Finally, hypothesis testing was conducted using t-tests, which evaluated the significance of the relationships between variables. Hypotheses were accepted or rejected based on p-values, with a threshold of  $<0.05$  indicating statistical significance. This rigorous analytical approach ensures robust conclusions regarding the causal relationships among Islamic service quality dimensions, patient satisfaction, and loyalty at the General Hospital of Welfare Development Unit Muhammadiyah Bantul.

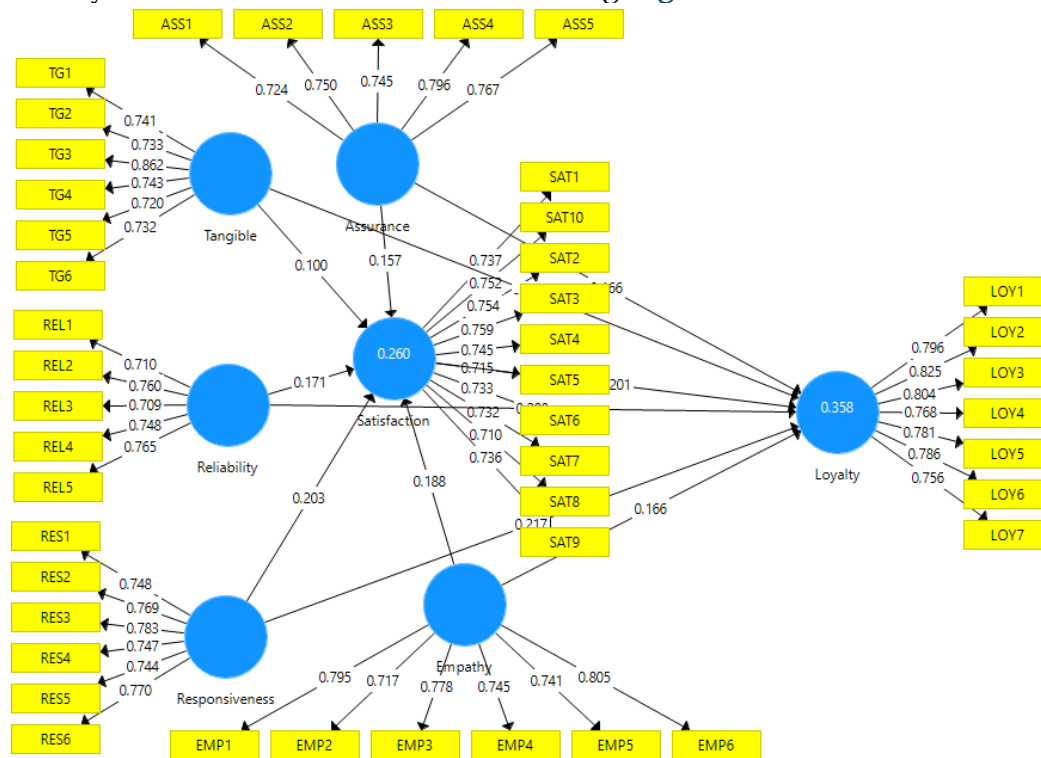
#### 4. Results and Discussion

Data analysis in this study used PLS-SEM. This analysis includes outer model analysis and inner model analysis.



#### 4.1. Outer Model Analysis

In the outer model analysis, validity and reliability tests were carried out on each latent construct, which includes the quality of Islamic service in the dimensions of tangible, reliability, responsiveness, assurance, empathy, patient satisfaction, and patient loyalty. The results of the outer model analysis can be described in the following **Figure 3**:



**Figure 3. Outer Model**

When looking at the image above, it can be seen that all indicators of the latent constructs studied have an outer loading of more than 0.7 so that all indicators are able to reflect the latent construct and meet convergent validity.

The Heterotrait-Monotrait Ratio (HTMT) value based on the test results can be described as follows:

**Table 1. Heterotrait-Monotrait Ratio (HTMT) Value**

	Assurance	Empathy	Loyalty	Reliability	Responsiveness	Satisfaction
Assurance						
Empathy	0.303					
Loyalty	0.397	0.427				
Reliability	0.280	0.327	0.423			
Responsiveness	0.267	0.317	0.429	0.196		
Satisfaction	0.358	0.379	0.462	0.360	0.376	
Tangible	0.285	0.139	0.128	0.163	0.267	0.225

Source: PLS-SEM analysis

**Table 1** shows that all values  $HTMT < 0.9$ . Based on this, all constructs have met discriminant validity. This means that each indicator is valid as a good measure for its construct.

The Average Variance Extracted (AVE) and construct reliability analysis are presented in **Table 2**, which summarizes key metrics used to evaluate the validity and reliability of the constructs in this study. These indicators include Cronbach's Alpha, Composite Reliability (CR), and the AVE values for each construct, covering dimensions such as Tangible, Reliability, Responsiveness, Assurance, Empathy, Satisfaction, and Loyalty.

**Table 2. AVE Test and Construct Reliability**

Construct	Cronbach's Alpha	Composite Reliability	AVE
Tangible	0.860	0.889	0.573
Reliability	0.793	0.857	0.546
Responsiveness	0.855	0.892	0.578
Assurance	0.815	0.870	0.573
Empathy	0.859	0.894	0.584
Satisfaction	0.907	0.923	0.544
Loyalty	0.898	0.920	0.621

Source: PLS-SEM analysis

**Table 2** indicates that all constructs have AVE values above 0.5, which confirms that the construct accounts for more than 50% of the variance in their respective indicators. This finding establishes that the constructs meet the standard for discriminant validity, ensuring that each construct is well-defined and statistically distinct from others.

Additionally, the Cronbach's Alpha values for all constructs exceed the generally accepted threshold of 0.7, with some constructs, such as Satisfaction (0.907) and Loyalty (0.898), scoring exceptionally high. This suggests strong internal consistency among the items within each construct. Similarly, the Composite Reliability scores for all constructs are above 0.7, further supporting the reliability of the measurement instruments. For instance, the CR for Empathy (0.894) and Responsiveness (0.892) indicates a high degree of precision and stability in measuring these dimensions.

These findings confirm that the scales used in this study are both valid and reliable, providing robust measures for analyzing the relationships between the constructs of Islamic service quality, patient satisfaction, and loyalty. By achieving these metrics, the study ensures the credibility of its results, enabling meaningful interpretations of the causal relationships being investigated.

#### 4.2. Inner Model Analysis

The evaluation of the inner model is a crucial step in understanding the relationships between latent constructs within the proposed framework. This analysis involves examining the parameter coefficient estimates and their levels of statistical significance to determine how well the model explains the relationships between the variables. One of the primary metrics used in this evaluation is the R-square ( $R^2$ ) value, which measures the proportion of variance in the endogenous (dependent) variables that is explained by the exogenous (independent) variables in the model (Noor, 2015).

Table 3. R-Square Value

Construct	R-Square	R-Square Adjusted
Satisfaction	0.260	0.234
Loyalty	0.358	0.331

Source: PLS-SEM analysis

The R-square value for the Satisfaction construct is 0.260, indicating that 26.0% of the variance in patient satisfaction is explained by the five dimensions of Islamic service quality – tangibles, reliability, responsiveness, assurance, and empathy. While this value suggests a moderate level of explanation, it also implies that additional factors not included in the model may contribute to patient satisfaction, warranting further exploration in future studies.

For the Loyalty construct, the R-square value is slightly higher at 0.358, meaning that 35.8% of the variance in patient loyalty can be attributed to both Islamic service quality dimensions and patient satisfaction. This finding reflects a stronger explanatory power for loyalty compared to satisfaction, emphasizing the cumulative effect of service quality and satisfaction in fostering patient loyalty.

In addition to the R-square values, the effect size ( $f^2$ ) was analyzed to assess the relative contribution of each exogenous variable to the endogenous constructs. The effect size measures the change in R-square when a specific exogenous variable is excluded from the model, providing insights into its substantive impact on the dependent variable (Garson, 2016; Setiaman, 2020). According to established thresholds, an  $f^2$  value of 0.02 indicates a small effect, 0.15 represents a medium effect, and 0.35 reflects a large effect (Hair et al., 2014).

This comprehensive evaluation of the inner model not only highlights the relationships between variables but also demonstrates the strength of Islamic service quality in influencing key outcomes such as patient satisfaction and loyalty. The findings provide a strong foundation for understanding how different dimensions of service quality interact to shape patient perceptions and behaviors in an Islamic healthcare context.

Table 4.  $f^2$  Values

	Satisfaction	Loyalty
Tangible	0.012	0.006
Reliability	0.035	0.054
Responsiveness	0.048	0.060
Assurance	0.028	0.036
Empathy	0.040	0.034
Satisfaction		0.046

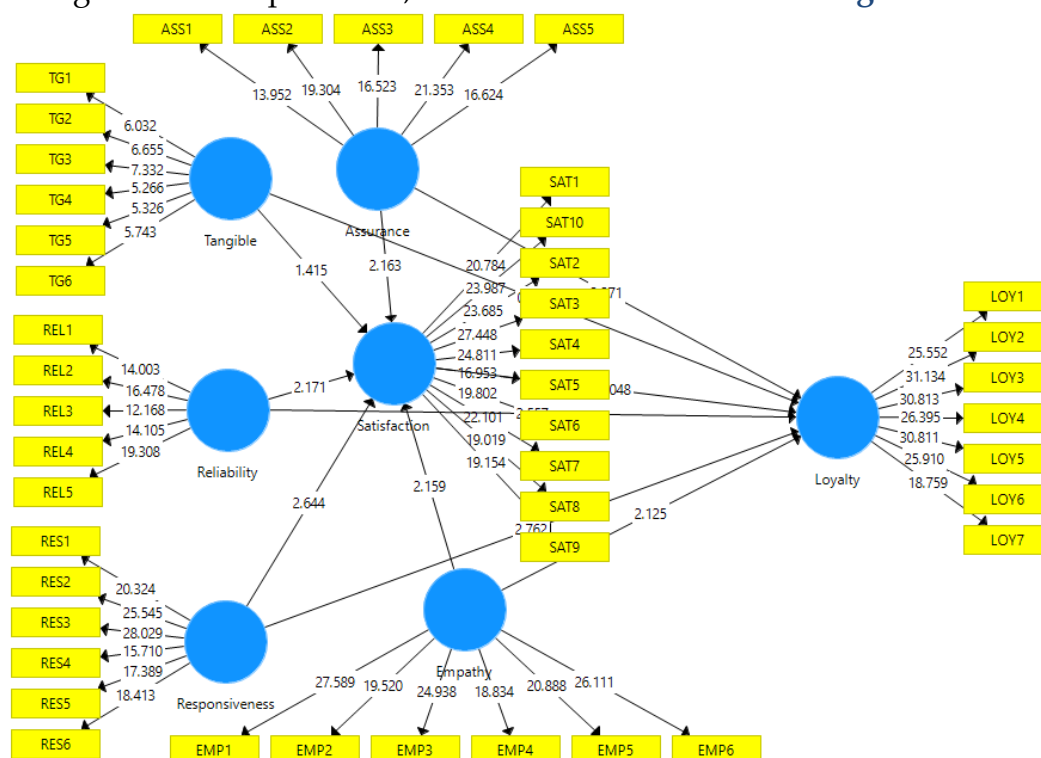
**Table 4** illustrates the effect size ( $f^2$ ) values for each dimension of Islamic service quality and their contributions to patient satisfaction and patient loyalty. The  $f^2$  values indicate the substantive influence of exogenous variables (e.g., tangible, reliability) on endogenous variables (e.g., satisfaction and loyalty), offering critical insights into the relative importance of each service quality dimension.

- The tangible dimension, encompassing the physical attributes of service, has a minimal impact, contributing only 1.2% to satisfaction and 0.6% to loyalty. This suggests that while

tangible factors like facilities and equipment may be appreciated, they are not the primary drivers of satisfaction or loyalty in this context.

- The reliability dimension, which reflects the consistency and dependability of healthcare services, demonstrates a moderate influence, contributing 3.5% to satisfaction and 5.4% to loyalty. This highlights the importance of consistent and trustworthy service delivery in fostering both satisfaction and long-term loyalty.
- The responsiveness dimension, related to the promptness and efficiency of service, has a slightly stronger effect, accounting for 4.8% of the variance in satisfaction and 6.0% in loyalty. This finding underscores the critical role of timely and attentive responses in meeting patient expectations and encouraging loyalty.
- The assurance dimension, which involves the competence, confidence, and ethical conduct of service providers, contributes 2.8% to satisfaction and 3.6% to loyalty. While assurance plays a supportive role, its effect is less pronounced compared to other dimensions, such as responsiveness and reliability.
- The empathy dimension, which reflects personalized care and understanding of patient needs, demonstrates a significant effect, contributing 4.0% to satisfaction and 3.4% to loyalty. This indicates that patients value emotional and personalized connections, particularly in an Islamic healthcare setting.
- Satisfaction, as an intermediate variable, has a direct influence on loyalty, contributing 4.6% to the variance in patient loyalty. This further confirms the importance of ensuring patient satisfaction to drive loyalty.

Furthermore, to obtain the path coefficient or t-statistic value, an inner model analysis was carried out using the bootstrap method, and the results are shown in **Figure 4**.



**Figure 4. Inner Model**

The influence between constructs from the inner model test can be described in the following table:



**Table 5. Path Coefficient**

	Original Sample	t-Statistics	p	Information
Tangible -> Loyalty	-0.065	0.840	0.401	Not Significant
Reliability -> Loyalty	0.200	2.626	0.009	Significant
Responsiveness -> Loyalty	0.217	3.056	0.002	Significant
Assurance -> Loyalty	0.166	2.342	0.020	Significant
Empathy -> Loyalty	0.166	2.017	0.044	Significant
Tangible -> Satisfaction	0.100	1.293	0.197	Not Significant
Reliability -> Satisfaction	0.171	2.162	0.031	Significant
Responsiveness -> Satisfaction	0.203	2.405	0.017	Significant
Assurance -> Satisfaction	0.157	2.029	0.043	Significant
Empathy -> Satisfaction	0.188	2.325	0.020	Significant
Satisfaction -> Loyalty	0.201	2.099	0.036	Significant
Tangible -> Satisfaction -> Loyalty	0.020	1.043	0.298	Not Significant
Reliability -> Satisfaction -> Loyalty	0.034	1.388	0.166	Not Significant
Responsiveness -> Satisfaction -> Loyalty	0.041	1.515	0.130	Not Significant
Assurance -> Satisfaction -> Loyalty	0.032	1.485	0.138	Not Significant
Empathy -> Satisfaction -> Loyalty	0.038	1.622	0.106	Not Significant

**Table 5** shows the influence of tangible on satisfaction and loyalty. A p value > 0.05 is obtained, so  $H_0$  is accepted, and  $H_1$  and  $H_6$  in this study are not supported, and it is concluded that the quality of Islamic service in the physical form dimension (tangible) does not affect patient loyalty and satisfaction at General Hospital of Welfare Development Unit Muhammadiyah Bantul. The insignificant influence of physical form (tangible) on patient satisfaction and loyalty supports the results of the study by Ratnawati et al. (Ratnawati et al., 2020)

If we look at the results of the study, the quality of Islamic service in the tangible dimension is not an important thing for patients to consider. Tangibles include aspects of the condition of the cleanliness of the treatment room, hospital staff clothing that is in accordance with Islamic law, health services according to the patient's gender, provision of places of worship, and a quiet environment for worship. The results of the study showed that patients considered the appearance of physical facilities, equipment, personnel, and communication materials in hospitals with an Islamic nuance, not an important thing that was considered an important advantage that influenced their satisfaction and their desire to return to the hospital.

On the influence of other dimensions of Islamic service quality, namely reliability, responsiveness, assurance, and empathy on patient satisfaction and loyalty, a positive t-statistic value and  $p < 0.05$  were obtained, so that  $H_0$  was rejected and  $H_2 - H_5$ , and  $H_7 - H_{10}$  was

supported. It was concluded that the quality of Islamic service dimensions of reliability, responsiveness, assurance, and empathy had a positive and significant effect on patient satisfaction and loyalty.

The quality of Islamic service in the reliability dimension includes the hospital's ability to provide Islamic health services, practice Islamic values when providing services to patients, and provide halal medicines. Providing health services in accordance with Islamic principles makes patients feel more valued and respected. This increases patient trust and satisfaction. Practicing Islamic values during services also shows concern for the patient's religious aspects. The practice of services in accordance with Islamic values, supported by the use of halal medicines, ensures that there is no conflict with religious beliefs, thereby increasing patient satisfaction and loyalty to the hospital.

The quality of Islamic service in the responsiveness dimension includes the openness of the medical team in disclosing non-halal materials, asking for permission if they have to carry out treatment that is not in accordance with Islamic protocols, allowing patients and families to perform worship, and providing clothing that covers the genitals for patients. Openness in disclosing non-halal materials used allows patients to make decisions before taking action. Asking for permission before carrying out treatment that may conflict with Islamic principles shows respect and concern for the patient's beliefs. Facilitating the implementation of worship and providing clothing that covers the genitals shows concern for the patient's spiritual needs and privacy. All of these things will create patient satisfaction and loyalty.

The quality of Islamic service in the assurance dimension includes the competence of the medical team in carrying out medical care according to Islamic law, the use of halal drugs, informing patients/families if they are using non-halal drugs and the provision of halal food and drinks. The competence of the medical team in carrying out care according to Islamic law and transparency regarding the use of halal or non-halal drugs ensures that patients feel safe and confident that the care they receive is in accordance with their religious standards. The provision of halal food and drinks shows attention to the patient's dietary needs according to their religious principles. All of this will increase patient satisfaction and loyalty.

The quality of Islamic service in the empathy dimension includes personalized attention and attention given by the medical team to patients by paying attention to religious values. Providing attention that pays attention to Islamic values shows that the hospital not only focuses on the medical aspect but also respects and understands the patient's spiritual needs. This creates a better relationship between patients and service providers and increases patient satisfaction and loyalty.

The analysis revealed a significant and positive relationship between patient satisfaction and loyalty, as indicated by a positive t-statistic value and a p-value below 0.05. Consequently, the null hypothesis ( $H_0$ ) was rejected, and the alternate hypothesis ( $H_{11}$ ) was supported. This finding confirms that patient satisfaction plays a crucial role in fostering loyalty among patients at the General Hospital of Welfare Development Unit Muhammadiyah Bantul. The results align with prior research (Fitriani et al., 2020; Meesala & Paul, 2016; Phonthanakitithaworn et al., 2020; Ratnawati et al., 2020), all of which highlight satisfaction as a key determinant of loyalty in healthcare contexts.

When patients are satisfied with the quality of services they receive, they are more likely to develop trust and emotional connections with the hospital. This positive perception not only encourages them to return for future healthcare needs but also motivates them to recommend the hospital to others. As Fatima et al. noted, customer satisfaction is a direct pathway to

building customer loyalty, which ultimately benefits the institution by increasing patient retention and enhancing its reputation (Fatima et al., 2018).

However, when examining the mediating role of satisfaction in the relationship between Islamic service quality dimensions and loyalty, the results were different. For all five dimensions of Islamic service quality—tangibles, reliability, responsiveness, assurance, and empathy—the p-values exceeded 0.05, leading to the rejection of  $H_0$  and the conclusion that hypotheses H12 through H16 were not supported. In simpler terms, satisfaction did not mediate the relationship between these service quality dimensions and patient loyalty.

This outcome provides critical insights into the dynamics of patient perceptions. For the tangible dimension, which encompasses physical facilities, cleanliness, and visual appeal, the study found no significant direct or mediated effect on satisfaction or loyalty. Patients appeared to view tangible factors as secondary to other aspects of care, likely because Islamic healthcare emphasizes spiritual and ethical dimensions over purely physical attributes.

Conversely, the dimensions of reliability, responsiveness, assurance, and empathy showed significant direct effects on loyalty but no mediated effects via satisfaction. This finding suggests that patients respond immediately and positively to these dimensions without requiring an intermediate step of satisfaction. For instance, reliability, reflecting consistent and dependable care aligned with Islamic principles, fosters trust directly. Similarly, responsiveness, or the promptness and attentiveness of service providers, creates a strong sense of value and respect. At the same time, assurance, which relates to competence and ethical behavior, instills confidence in patients. Finally, empathy, defined as personalized and compassionate care, strengthens emotional connections and reinforces loyalty.

The absence of a mediating role for satisfaction in this context highlights the unique nature of Islamic healthcare services. Patients may perceive the direct experience of ethical and spiritually aligned care as more impactful than broader satisfaction assessments. This demonstrates that hospitals like the General Hospital of Welfare Development Unit Muhammadiyah Bantul, which actively practice Islamic values in their services, can directly influence patient loyalty by prioritizing ethical, empathetic, and responsive care.

In conclusion, while satisfaction remains a critical factor influencing patient loyalty, this study underscores the importance of directly addressing key dimensions of Islamic service quality. By ensuring that reliability, responsiveness, assurance, and empathy are consistently upheld, the hospital can foster stronger, more sustainable relationships with its patients. This approach aligns with the values and expectations of an Islamic healthcare context, where direct experiences of trust, respect, and compassion hold paramount importance in patient decision-making.

## 5. Conclusion

The findings of this study provide valuable insights into the role of Islamic service quality in shaping patient satisfaction and loyalty at the General Hospital of Welfare Development Unit Muhammadiyah Bantul. It was found that the tangible dimension—including physical facilities, equipment, and visual aesthetics—does not significantly influence patient satisfaction or loyalty. This suggests that patients in an Islamic healthcare context prioritize ethical and spiritual aspects of care over the physical environment.

In contrast, the dimensions of reliability, responsiveness, assurance, and empathy positively and significantly impact both patient satisfaction and loyalty. These results highlight the importance of delivering consistent, prompt, and attentive care, ensuring professional

competence, and fostering personalized compassion in creating positive patient experiences and sustaining long-term loyalty.

This study also reveals that patient satisfaction does not mediate the relationship between the dimensions of Islamic service quality and patient loyalty. Instead, the direct effects of these dimensions—particularly the non-tangible aspects—indicate that patients derive immediate value from culturally and spiritually aligned care, which reflects broader societal and religious expectations.

To enhance service quality and align with societal needs, it is recommended that the General Hospital of Welfare Development Unit Muhammadiyah Bantul develop and institutionalize Standard Operating Procedures (SOPs) that emphasize reliability, responsiveness, assurance, and empathy. These SOPs should be designed to integrate Islamic principles consistently across all patient care interactions.

Furthermore, regular monitoring and evaluation systems should be implemented to ensure the continuous improvement of Islamic healthcare services. These systems will enable hospital management to identify gaps, address areas for improvement, and maintain alignment with patient expectations and Islamic ethical principles.

In addition, strengthening the integration of Islamic service quality within healthcare policies can foster greater trust among communities and promote equitable access to culturally sensitive services. By addressing the ethical and spiritual needs of patients, hospitals not only enhance patient loyalty but also contribute to building stronger social cohesion and mutual respect within society. These efforts position healthcare institutions as key actors in driving societal well-being and reinforcing the role of ethical healthcare practices in public policy frameworks.

## 6. Acknowledgment

The authors realize that the preparation of this research article would not have been possible without the assistance of various parties. Therefore, the authors would like to express their deepest gratitude to the Postgraduate Program, Sunan Kalijaga State Islamic University of Yogyakarta, which has provided attention, opportunity, and full support in the implementation of this research.

## 7. Declaration of Conflicting Interests

The authors have declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

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