SERVICE QUALITY AS A DETERMINANT OF PATIENT SATISFACTION: AN EMPIRICAL STUDY IN THE HEALTHCARE SECTOR

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ABSTRACT

In the contemporary era dominated by the service economy, the healthcare sector stands out as one of the most vital components of the service industry. This study aims to investigate the factors influencing patient satisfaction within the healthcare sector, with a particular focus on the role of service quality. The relationship between patient satisfaction and service quality identified as a key determinant of overall satisfaction is thoroughly examined. To achieve this objective, the SERVQUAL model was employed alongside a Likert scale to measure various dimensions of service quality. A structured questionnaire was administered to a sample of 136 respondents, and the collected data were analyzed using correlation and regression techniques via SPSS version 27. The findings of the study indicate that among the five dimensions of the SERVQUAL model, *Empathy* and *Responsiveness* are the most influential factors contributing to increased patient satisfaction. Additionally, *Tangibles* (i.e., physical facilities, equipment, and appearance of personnel) also play a significant role. In contrast, the dimensions of *Reliability* and *Assurance* were found to have no statistically significant impact on patient satisfaction within the context of this research.

Keywords: patient satisfaction, service quality, healthcare, SERVQUAL, empirical analysis

JEL Classification: I11, M31, L84, C83

INTRODUCTION

In today's healthcare sector, the relationship between service quality and customer (patient) satisfaction is gaining increasing significance. For the healthcare industry, all activities beginning from the patient's initial contact with a medical facility to diagnosis, treatment, and post-treatment care are considered to be components of service quality, playing a crucial role in determining overall satisfaction. During this process, patients expect the institution to deliver services that are accurate, clean, and professionally administered (Hajiyeva, 2021). Patients who are satisfied with the hospital's services are more likely to recommend the same hospital to others (Hameed, 2023).

The marketing literature places significant emphasis on improving customer satisfaction. Satisfaction is defined and measured in various ways across various studies. One common understanding is that satisfaction arises when expectations are met. If a firm's offerings align with customer expectations, customers are more likely to be satisfied (Inamullah, 2012). Over time, customers tend to expect higher levels of quality from products and services. Satisfaction is a relative concept and relies on each individual's expectations and their evaluation of the service received (Sofaer & Firminger, 2005). For service-oriented firms, the most critical aspect lies in the quality of services delivered, the process of service production, and the way services are presented to the customer.

Patient satisfaction and the quality of healthcare services are critical elements for the long-term success of healthcare institutions. (Ramsaran-Fowdar, 2005). Thus, patient satisfaction emerges as a variable that promotes the quality of healthcare organizations by enabling the assessment and determination of patients' most relevant dimensions and their level of satisfaction. It serves as a tool for evaluating the quality of medical care and has therefore become an important and frequently used indicator. Patient satisfaction influences clinical outcomes, medical malpractice claims, and the delivery of timely, efficient, and patient-centered healthcare services (Prakash, 2010).

Like other areas of the service sector, healthcare has also transformed into a more competitive market. The increasing number of private medical institutions serves as evidence of this trend. In such an environment, measuring satisfaction and service quality can assist managers in monitoring, enhancing, and optimizing various organizational aspects. Compared to other service sectors, healthcare professionals must be particularly attentive to behaviors that may influence patients' expectations (Naidu, 2009).

Healthcare systems are constantly evolving and developing. For this reason, analyzing customer satisfaction is of great importance. The results obtained can provide valuable and unique insights into the quality of services delivered by medical institutions. In

earlier periods, the concept of patient satisfaction was often overlooked; however, it has increasingly gained significance over time. (Ferreira et al., 2023).

Customer satisfaction is considered a strategic priority for healthcare institutions. (Wolf et al., 2014). As a consequence, hospitals should deliver services promptly to enhance patient satisfaction and improve overall healthcare delivery. Staff members and all employees should communicate courteously with patients to foster positive relationships. Additionally, patient complaints should be addressed on time to prevent unnecessary delays and to build trust between patients and healthcare providers. (Loth G., & Godwin N., 2018).

THEORETICAL BACKGROUND

The concept of service quality has been a central focus in management and marketing literature, particularly in the context of service-oriented industries such as healthcare. Service quality is widely recognized as a critical determinant of customer satisfaction and organizational success (Parasuraman et al., 1988). In healthcare, where patient outcomes and experiences are paramount, understanding the factors that contribute to service quality is essential for improving patient satisfaction and fostering loyalty. This study adopts the SERVQUAL model, developed by Parasuraman et al. (1985, 1988), as its theoretical framework to evaluate service quality and its impact on patient satisfaction in the healthcare sector.

The SERVQUAL Model

The SERVQUAL model provides a robust framework for assessing service quality by measuring the gap between customer expectations and perceptions across five dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy (Parasuraman et al., 1988). Tangibles refer to the physical aspects of the service environment, such as facilities, equipment, and the appearance of personnel. Reliability pertains to the ability to deliver promised services dependably and accurately. Responsiveness reflects the willingness to provide prompt service and assist customers. Assurance encompasses the knowledge, competence, and courtesy of employees, as well as their ability to inspire trust and confidence. Finally, Empathy involves providing individualized care and attention to customers (Zeithaml et al., 1990).

The SERVQUAL model has been extensively applied in healthcare settings to evaluate patient perceptions of service quality (Babakus & Mangold, 1992). Studies such as Lee et al. (2019) and Ariffin et al. (2022) have demonstrated that these dimensions significantly influence patient satisfaction, with varying degrees of impact depending on contextual factors such as cultural norms and healthcare system structures. For instance, Empathy and Responsiveness are often cited as critical drivers of patient satisfaction due to the interpersonal nature of healthcare services, where trust and emotional support are highly valued (Donabedian, 1980).

Service Quality and Patient Satisfaction

Patient satisfaction is a multidimensional construct that reflects patients' subjective evaluations of their healthcare experiences (Westbrook & Oliver, 1991). It is closely linked to service quality, as patients' perceptions of the care they receive directly influence their overall satisfaction and loyalty to healthcare providers (Kotler & Keller, 2016). The relationship between service quality and patient satisfaction is grounded in the Expectancy-Disconfirmation Theory, which posits that satisfaction arises when perceived service performance meets or exceeds expectations (Oliver, 1980). In healthcare, this theory suggests that patients compare their expectations of service quality (e.g., timely care, competent staff, and compassionate interactions) with their actual experiences, and the resulting gap shapes their satisfaction levels.

Prior research has consistently shown that high service quality enhances patient satisfaction, leading to improved patient retention, positive word-of-mouth, and better clinical outcomes (Choi et al., 2004). For example, Zaim et al. (2010) found that Empathy and Assurance were particularly influential in shaping patient satisfaction in hospital settings, as patients often prioritize emotional support and trust in healthcare providers. Similarly, Tangibles, such as clean and modern facilities, have been shown to create a positive first impression, indirectly contributing to satisfaction (Andaleeb, 2001).

LITERATURE REVIEW

Service quality has long been recognized as a critical determinant of satisfaction across service industries, particularly in healthcare, where the stakes are high and the emotional intensity is greater than in other sectors. The relationship between service quality and patient satisfaction is multidimensional, encompassing tangible and intangible factors that shape the patient's overall experience.

Service quality is commonly conceptualized through the SERVQUAL model developed by Parasuraman et al. (1988), which includes five core dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Satisfaction, in contrast, refers to the emotional response resulting from the perceived discrepancy between expectations and actual service performance (Kotler, 1999; Oliver, 1997). Miarsih (2025) conducted an empirical study at Sultan Imanuddin General Hospital in Indonesia, confirming that four of the five SERVQUAL dimensions reliability, assurance, empathy, and responsiveness had significant positive relationships with outpatient satisfaction, while physical evidence (tangibles) did not. Empathy emerged as the most influential factor, highlighting the importance of interpersonal care, such as attentiveness, concern, and emotional support provided by healthcare staff (Miarsih, 2025). This finding aligns with earlier assertions by Supriyanto and Ernawaty (2010), who emphasized that satisfaction in healthcare begins with the first point of contact and is shaped by the consistency and responsiveness of staff

throughout the patient's journey. The inability of physical evidence to significantly predict satisfaction in Miarsih's study may reflect the higher weight patients assign to relational and functional elements over environmental aesthetics in healthcare contexts.

Insights from Other Service Sectors

Studies in other industries reaffirm the importance of service quality in shaping satisfaction. Khan, Yusoff, and Kakar (2025) examined the tourism industry and found that dimensions like accessibility, accommodation, and venue quality were significantly related to tourist satisfaction. Though these factors differ contextually from healthcare, they parallel the SERVQUAL dimensions, highlighting how ease of access (reliability), comfort (tangibles), and personalized service (empathy and assurance) consistently affect satisfaction across services.

Similarly, Tran and Nguyen (2025) investigated retail service quality in Vietnam and found that reliability and customer care were the most significant predictors of satisfaction during the COVID-19 pandemic. Their model, while adapted to retail, supported the SERVQUAL framework by confirming the mediating role of satisfaction between service quality and customer loyalty. This reinforces the generalizability of service quality dimensions across service environments and the central role of satisfaction as a performance outcome.

The relationship between service quality and patient satisfaction has received considerable scholarly attention in recent years. Ariffin et al. (2022) examined patient satisfaction in Malaysian private hospitals by employing the Malaysian Customer Satisfaction Index (MCSI), which integrates constructs such as hospitalization quality, perceived value, and patient loyalty. Their findings revealed that service quality, outcome quality, and patient rights and privacy are among the most critical drivers of satisfaction in the context of inpatient services. The study also utilized an Importance-Performance (IP) matrix to identify priority areas for healthcare service improvement. The authors emphasized that relying solely on professional standards may not capture the true needs and preferences of patients. Zaim et al. (2010) investigated the determinants of patient satisfaction in Turkish hospitals using an adapted SERVQUAL model tailored for healthcare environments. The study identified tangibility, reliability, courtesy, and empathy as the most influential factors on satisfaction, while responsiveness and assurance were not statistically significant. Logistic regression analysis confirmed that improvements in specific service quality dimensions substantially increased the odds of higher satisfaction and loyalty. The researchers highlighted that continuous monitoring and enhancement of service delivery processes are essential for patient-centered healthcare. Their findings reinforce the necessity of aligning hospital services with patient expectations and

emotional needs. Fatima, Malik, and Shabbir (2018) investigated the relationship between hospital healthcare service quality, patient satisfaction, and loyalty within Pakistan's private healthcare sector. The study collected data from 611 patients in six private hospitals located in Islamabad, focusing on five service quality dimensions: physical environment, customer-friendly environment, communication, privacy and safety, and responsiveness. Findings indicated that improved healthcare service quality significantly enhances patient satisfaction, which in turn strengthens patient loyalty. Moreover, patient satisfaction was found to mediate the relationship between service quality and loyalty. These results underscore the strategic importance of high-quality, patient-centered care in fostering loyalty in private healthcare settings.

The convergence of findings from healthcare, tourism, and retail sectors indicates that certain service quality dimensions particularly empathy, reliability, and responsiveness are universally critical in shaping satisfaction. While environmental tangibles may carry more weight in tourism and retail, healthcare settings emphasize human interaction, reassurance, and care continuity. The implication for healthcare administrators is clear: investments in staff training, communication skills, and service responsiveness can yield higher satisfaction and, by extension, loyalty and better health outcomes. The relational components of service delivery matter profoundly in environments where patients are vulnerable and expect emotional support in addition to clinical care.

MATERIALS AND METHODS

In this study, customer satisfaction was measured using a quantitative approach based on the SERVQUAL model, which is widely recognized for evaluating dimensions of service quality. To measure customer satisfaction, the study employed the 'Customer Satisfaction' scale developed by Choi, Cho, Lee, Lee, and Kim (2004) in their research titled *'The Relationships Among Quality, Value, Satisfaction and Behavioral Intention in Health Care Provider Choice: A South Korean Study'*, which has proven reliability and validity. A questionnaire using a 5-point (The amount I paid for the service was appropriate, The quality of the service I received exceeded the amount I paid, I would recommend the healthcare institution from which I received the service to others, If I need medical services in the future, my first choice will be the same healthcare institution, I will speak positively about the healthcare institution from which I received the service).

Likert scale was administered to assess participants' perceptions and expectations of service quality. The collected data were analyzed through correlation and regression techniques using SPSS in order to identify the significant determinants of customer satisfaction.

A company's approach to service delivery reflects the relationship between service quality and customer satisfaction. To measure customers' perceptions of service quality, a multidimensional tool known as **SERVQUAL** was developed and described along with its potential applications. This tool comprises 22 items that assess various aspects of service quality, categorized into five key dimensions (Parasuraman, A.; Zeithaml, V.A.; Berry, L.L., 1988):

1. **Tangibles**: Physical facilities, equipment, and the appearance of personnel
2. **Reliability**: The ability to perform the promised service dependably and accurately
3. **Responsiveness**: Willingness to help customers and provide prompt service
4. **Assurance**: Knowledge and courtesy of employees and their ability to convey trust and confidence
5. **Empathy**: Caring and individualized attention provided to customers by the firm

Table 1. Demographic Characteristics of the Respondents

Age	n	%
Under 26	51	37.5
27-35	48	35.3
36-44	24	17.6
44 and above	13	9.6
Total	**136**	**100.0**
Gender	**n**	**%**
Female	83	61.0
Male	53	39.0
Total	**136**	**100.0**
Marital Status	**n**	**%**
Married	64	47.1
Single	72	52.9
Total	136	100.0
Education Level	**n**	**%**
Secondary	20	14.7
University	105	77.2
Vocational/College	11	8.1
Toplam	**136**	**100.0**
Monthly Income	**n**	**%**
0-500 AZN	56	41.2
500-1000 AZN	50	36.8
1000-2000 AZN	23	16.9
2000+ AZN	7	5.1
Total	**136**	**100.0**

Source: Compiled by the authors

The demographic profile of the respondents, as presented in Table 1, provides key insights into the characteristics of the study sample (N = 136).

Age: The majority of respondents (72.8%) are aged 35 years or younger, with 37.5% under the age of 26 and 35.3% between 27 and 35 years. Participants aged 36–44 constitute 17.6%, while those aged 44 and above represent only 9.6%. This indicates a predominantly young respondent base.

Gender: In terms of gender distribution, female participants account for a larger proportion (61.0%) compared to their male counterparts (39.0%), suggesting a gender imbalance in favor of women within the sample.

Marital Status: The sample includes slightly more single individuals (52.9%) than married ones (47.1%), indicating a relatively balanced distribution across marital status.

Education Level: A considerable majority of respondents (77.2%) hold a university degree, while 14.7% have attained secondary education, and 8.1% possess vocational or college-level qualifications. This reflects a highly educated sample population.

Monthly Income: Income distribution reveals that a substantial portion of respondents (78.0%) earn 1,000 AZN or less per month, with 41.2% earning between 0–500 AZN and 36.8% earning 500–1,000 AZN. Only a small minority (5.1%) report earning over 2,000 AZN, indicating that the sample predominantly comprises individuals from lower to middle income brackets.

Table 2. Specific Type of Healthcare Service Received

| Type of Institution	n	%
Private Medical Institution	50	41.7
Public Medical Institution	70	58.3
Total	120	100.0
Healthcare Service Type	**n**	**%**
Outpatient and Inpatient Servic	7	5.1
Outpatient Services Only	6	4.4
Hygiene and Epidemiology Center	2	1.5
Doctor's Office	7	5.1
Hospital	71	52.2
Polyclinic	33	24.3
Medical Station	10	7.4
Total	136	100.0

Source: Compiled by the authors

The distribution of healthcare services based on the type of institution shows that 58.3% (n = 70) of services were provided by public medical institutions, while 41.7% (n = 50) were delivered by private medical institutions, totaling 120 cases. Regarding the types of healthcare services received, the majority were hospital services, accounting for 52.2% (n = 71) of cases. Polyclinics provided 24.3% (n = 33) of the services, followed by medical stations at 7.4% (n = 10). Other service types included outpatient and inpatient services (5.1%, n = 7), doctor's offices (5.1%, n = 7), outpatient services only (4.4%, n = 6), and hygiene and epidemiology centers (1.5%, n = 2). The total number of healthcare service instances recorded was 136.

Research Model And Hypotheses

The research model is based on the SERVQUAL framework to examine the impact of service quality on patient satisfaction. It considers the five dimensions of service quality (Tangibles, Reliability, Responsiveness, Assurance, and Empathy) as independent variables and patient satisfaction as the dependent variable. Additionally, the model includes hypotheses testing the influence of demographic factors (gender and age) on service quality and patient satisfaction. This model provides a theoretical and empirical foundation for highlighting the importance of patient-centered care.
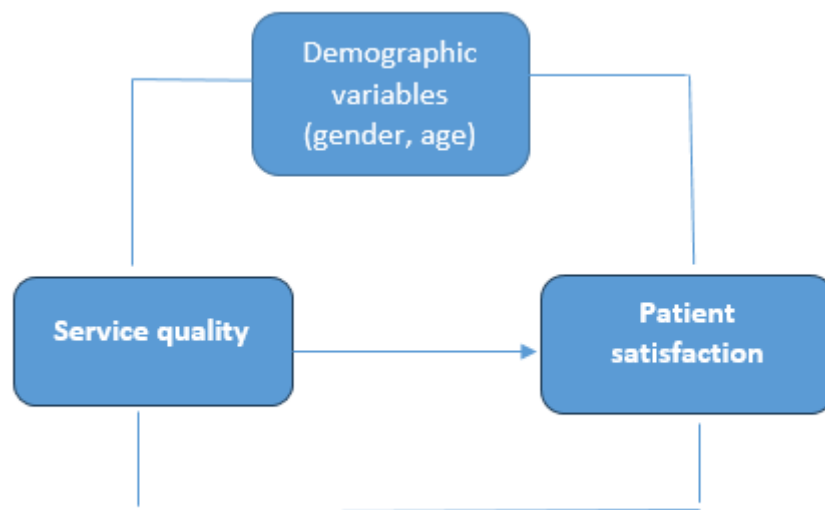
Figure 1: The Theoretical Model and Hypotheses of the Study

H1: Patient satisfaction and service quality differ significantly by gender; there are statistically significant differences in both satisfaction and service quality levels between male and female patients.

H2: Service quality varies significantly across different age groups.

H3: The different components of service quality (reliability, responsiveness, empathy, and physical characteristics) have significantly different impacts on patient satisfaction.

RESEARCH FINDINGS

Reliability is determined based on the consistency of results obtained when measurement tools and scales are reapplied under the same conditions. As the level of reliability increases, the credibility of the data obtained from the measurement is also considered to improve (Ahmadov et al., 2023). In this study, the reliability analysis was conducted using the Cronbach's Alpha coefficient.

Table 1: Results of Reliability Analysis

Scale	Number of Items	Cronbach's Alpha Value
Service Quality	22	0.970
Patient Satisfaction	5	0.873

The results of the reliability analysis present Cronbach's Alpha values for the two main scales: Service Quality and Patient Satisfaction. The analysis indicates that the Cronbach's Alpha value for the Service Quality scale was calculated as 0.970, which reflects a high level of reliability and confirms the consistency of the scale. For the Patient Satisfaction scale, the Cronbach's Alpha value was 0.873, also indicating a high degree of reliability. Overall, the Cronbach's Alpha values obtained for both scales exceed the commonly accepted thresholds for reliability, demonstrating that the scales used in the study are statistically reliable.

Table 2: T-Test Analysis by Gender

Ölçü	Gender	N	Mean (X)	SD	Std. Error Mean	F	P
Service Quality	Female	83	3.3921	.74591	.08187	4.611	0.034
	Male	53	3.4451	.94666	.13003		
Patient Satisfaction	Female	83	3.2000	.75997	08342	5.897	0.016
	Male	53	3.2491	1.00070	.13746		

** Note: p < 0.05, two-tailed test, (N = 136)

The results of the T-test analysis presented in Table 2 examine the differences in Service Quality and Patient Satisfaction based on gender. According to the analysis, a significant difference was found between female and male respondents in the Service Quality scale (F = 4.611, p = 0.034). This result is statistically significant at the 0.05 level and indicates that the experience of Service Quality differs between female and male groups. The mean Service Quality score for females was 3.3921, whereas for males it was 3.4451.

Similarly, the analysis of the Patient Satisfaction scale revealed a statistically significant difference between females and males (F = 5.897, p = 0.016). The mean Patient Satisfaction score was 3.2000 for females and 3.2491 for males. Since the p-values for both scales are below 0.05, the results are considered statistically

significant. This analysis demonstrates that both Service Quality and Patient Satisfaction differ significantly according to gender.

Table 3: ANOVA Results by Age

Anova					
Scale	**Age Group**	**N**	**Mean (x)**	**F**	**P**
Service Quality	Under 26		3.4786	0.209	0.890
	27-35		3.4006		
	36-44		3.3333		
	44 and above		3.3462		
	Total	136	3.4128		

Note: p < 0.05, two-tailed test, (N = 136)

The ANOVA analysis results presented in Table 3 aim to examine whether there are statistically significant differences in Service Quality across different age groups. According to the findings, no notable differences were observed in the mean Service Quality scores among the age groups (F = 0.209, p = 0.890). These values indicate that there is no statistically significant variation in Service Quality based on age. The mean scores are relatively similar across groups, and the p-value exceeds the commonly accepted significance levels of 0.01 and 0.05, leading to the rejection of the hypothesis. Based on the results, age does not have a significant effect on the Service Quality experience.

Table 4: Correlation Analysis

Measures	Mean	SD	1	2	3	4	5	6	7
Service Quality (1)	3.4128	.82693	1						
Patient Satisfaction (2)	3.2191	.85855	.824**	1					
Tangibles (3)	3.4467	.92166	.853**	.688**	1				
Reliability (4)	3.4176	.88626	.933**	.734**	.764**	1			
Responsiveness (5)	3.4375	.88021	.929**	.777**	.721**	.851**	1		
Assurance (6)	3.4007	.91403	.943**	.779**	.742**	.833**	.874**	1	
Empathy (7)	3.3706	.90252	.930**	.800**	.710**	.814**	.833**	.886**	1

Source: Compiled by the authors

 The results of the correlation analysis illustrate the relationships among Service Quality (SQ), Satisfaction, Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The analysis provides the means (M) and standard deviations (SD) for each variable, and all correlation coefficients are statistically significant at the 0.01 level. The Service Quality scale shows very strong positive correlations with the other

variables: Satisfaction (r = .824), Tangibles (r = .853), Reliability (r = .933), Responsiveness (r = .929), Assurance (r = .943), and Empathy (r = .930). These results confirm the existence of strong associations between Service Quality and each of its components. Similarly, the Satisfaction variable also demonstrates significant positive correlations with other dimensions: Tangibles (r = .688), Reliability (r = .734), Responsiveness (r = .777), Assurance (r = .779), and Empathy (r = .800). This suggests that patient satisfaction is closely linked to various dimensions of service quality. Tangibles also show statistically significant positive correlations with Reliability (r = .764), Responsiveness (r = .721), Assurance (r = .742), and Empathy (r = .710). Furthermore, Reliability, Responsiveness, Assurance, and Empathy exhibit significant and strong intercorrelations, with correlation values ranging between .814 and .933. Overall, this analysis demonstrates that Service Quality and its key components—Satisfaction, Tangibles, Reliability, Responsiveness, Assurance, and Empathy—are strongly and positively interrelated. These high correlation coefficients suggest that improvements in the various aspects of service quality are likely to significantly enhance patient satisfaction as well as other related dimensions of perceived quality.

Table 5: Results of Multiple Regression Analysis

Model	R	R2	Adjusted R^2	Standard Error
1	0.833	0.694	0.682	0.48430

Independent Variables: Empathy, Tangibles, Responsiveness, Reliability, Assurance

The values of $R^2 = 0.694$ and Adjusted $R^2 = 0.682$ indicate a high explanatory power of the independent variables in predicting patient satisfaction. These results suggest that healthcare institutions can make strategic decisions aimed at improving patient satisfaction by enhancing these variables.

Table 6: Multiple Regression Analysis Results

Variable	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	p
Constant	0.302	0.179		1.688	0.094
Tangibles	0.147	0.074	0.158	2.004	0.047
Reliability	-0.005	0.103	-0.006	-0.052	0.959
Responsiveness	0.254	0.111	0.261	2.295	0.023
Assurance	0.076	0.120	0.081	0.635	0.526
Empathy	0.384	0.106	0.404	3.633	<0.001

Source: Compiled by the authors

Dependent Variable: Patient Satisfaction

The results of the multiple regression analysis are presented in Table 6. This analysis evaluates the relationship between Patient Satisfaction (dependent variable) and several independent variables: Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The interpretation of the results is as follows:

Tangibles: This variable has a positive effect on patient satisfaction, with B = 0.147 and Beta = 0.158. The t-value is 2.004 and the p-value is 0.047, indicating that the relationship is statistically significant at the 0.05 level. This suggests that improvements in the physical environment and tangible aspects of healthcare services may enhance patient satisfaction.

Reliability: The impact of this variable is minimal and statistically insignificant. With B = -0.005, Beta = -0.006, t = -0.052, and p = 0.959, the results suggest that reliability does not have a significant effect on patient satisfaction. This indicates a very weak or negligible relationship between this dimension and satisfaction in the current model.

Responsiveness: This variable shows a positive and statistically significant effect on patient satisfaction, with B = 0.254, Beta = 0.261, t = 2.295, and p = 0.023. These results imply that timely and attentive responses to patients' needs and inquiries significantly contribute to their satisfaction.

Assurance: With B = 0.076, Beta = 0.081, t = 0.635, and p = 0.526, the variable Assurance does not exert a statistically significant influence on patient satisfaction. This result suggests that this component does not have a meaningful impact in the context of this model.

Empathy: Empathy demonstrates the strongest and most significant effect on patient satisfaction. The coefficients are B = 0.384, Beta = 0.404, t = 3.633, and p < 0.001. These findings indicate that empathy expressed by healthcare professionals through compassion, understanding, and personalized attention substantially enhances patients' overall satisfaction.

The unstandardized coefficients (B) and standard errors indicate how each independent variable affects the dependent variable (Patient Satisfaction). The standardized coefficients (Beta) allow for comparison of the relative importance of each predictor within the model.

The t-values test the statistical significance of each predictor's effect, while the p-values indicate whether these effects are significant. In this analysis, **Empathy** and **Responsiveness** are statistically significant predictors of patient satisfaction, highlighting their critical roles in shaping the patient experience.

DISCUSSION

The findings of this study provide a comprehensive examination of the impact of service quality on patient satisfaction, offering significant insights for the healthcare sector. Notably, the Empathy and Responsiveness dimensions were found to have the most pronounced effect on patient satisfaction. These results align closely with numerous studies in the existing literature. For instance, Zaim et al. (2010), in their study conducted in Turkey, identified Empathy and Tangibles as key factors enhancing patient satisfaction. Similarly, in our study, the Tangibles dimension was found to be statistically significant and positively influenced patient satisfaction. This underscores the importance of healthcare institutions investing in the physical environment to improve patient experience. Likewise, Shabbir et al. (2016), who conducted research on public and private hospitals in Pakistan, reported that dimensions of service quality related to nursing and doctor care, operational processes, and physical environment significantly contributed to patient satisfaction. Additionally, according to Elsner, and Dennis's (2014) research based on a simulation model in Azerbaijan, the implementation of new technologies in the healthcare system can be combined with a redesign of the incentive mechanism. This leads to better outcomes at the service level. Our finding that the Responsiveness dimension plays a prominent role in patient satisfaction supports Shabbir et al.'s emphasis on operational processes, indicating that healthcare providers' prompt and effective response to patient needs enhances satisfaction levels.

However, the lack of a significant effect of the Reliability and Assurance dimensions on patient satisfaction in our study contrasts with some findings in the literature. For example, Ariffin et al. (2022) highlighted reliability as an important determinant of satisfaction in their Malaysian study. This discrepancy may be attributed to geographical, cultural, organizational differences in healthcare services, or variations in patient expectations. Additionally, perceptions of reliability in healthcare may evolve over time alongside patient experiences and expectations, suggesting these dimensions' effects might vary across contexts. The prominence of Empathy as the strongest predictor of patient satisfaction reaffirms the critical importance of a patient-centered approach in healthcare services. Fatima, Malik, and Shabbir (2018), in their research conducted in Pakistan, similarly emphasized the strong relationship between patient-centered care and satisfaction. This finding illustrates that healthcare professionals' attention to patients' emotional needs and personalized service delivery significantly enhances patient loyalty and satisfaction. Furthermore, the significant differences in perceptions of service quality and satisfaction between male and female patients suggest that gender influences patient experiences. This highlights the importance of considering demographic factors in healthcare marketing and

management strategies. Conversely, the absence of significant differences across age groups indicates that age may not substantially affect patient perceptions in this context. In conclusion, this study demonstrates that prioritizing empathy and responsiveness in healthcare services is critical for enhancing patient satisfaction. Healthcare institutions should focus not only on improving physical facilities but also on investing in staff training and effective patient communication to elevate service quality. Although some variability exists across different cultural and sectoral contexts, a human-centered and responsive service approach generally contributes positively to patient satisfaction. Future research is recommended to further investigate the effects of Reliability and Assurance dimensions and to conduct comparative studies across diverse healthcare systems. In the study by Hasanlı and Salihova (2019), the impact of investments in the tourism sector on other sectors, production volume, and employment levels in the country was evaluated using models based on "Input-Output" tables for the economies of Azerbaijan, Turkey, and Kazakhstan. Input-output models highlight the interconnections between the tourism sector and other industries such as transportation, accommodation, and retail. A similar pattern can be observed in the healthcare sector; for instance, a hospital with high-quality services can attract more patients, thereby increasing the demand for pharmaceuticals, medical equipment, and support services. This reflects a ripple effect similar to the economic impact generated by tourism investments.

CONCLUSION

This empirical study conducted within the healthcare sector of Azerbaijan provides critical insights into the relationship between service quality and patient satisfaction, employing the SERVQUAL model to evaluate the impact of its five dimensions— Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The findings reveal that Empathy and Responsiveness are the most significant predictors of patient satisfaction, with Empathy demonstrating the strongest influence (B = 0.384, $p < 0.001$) followed by Responsiveness (B = 0.254, $p = 0.023$). These results underscore the pivotal role of patient-centered care, where compassionate, individualized attention and prompt responses to patient needs significantly enhance the overall healthcare experience. Tangibles, encompassing physical facilities and equipment, also emerged as a statistically significant factor (B = 0.147, $p = 0.047$), indicating that a well-maintained and aesthetically pleasing environment contributes to patient satisfaction, albeit to a lesser extent than interpersonal factors. In contrast, Reliability and Assurance were found to have no statistically significant impact on patient satisfaction in this study ($p = 0.959$ and $p = 0.526$, respectively). This deviation from some prior research, such as Ariffin et al. (2022), which highlighted reliability as a key determinant, may be attributed to contextual factors such as cultural expectations,

organizational differences, or varying patient priorities in the Azerbaijani healthcare setting. These findings suggest that while consistent and dependable service delivery and staff competence are important, they may not be the primary drivers of satisfaction in this specific context.

The study also examined demographic influences, revealing significant gender-based differences in perceptions of both service quality ($p = 0.034$) and patient satisfaction ($p = 0.016$). Female patients reported slightly lower mean scores for both constructs compared to male patients, suggesting that gender-specific expectations or experiences may shape perceptions of healthcare services. Conversely, no significant differences were observed across age groups ($p = 0.890$), indicating that service quality perceptions are relatively consistent across different age demographics in this sample. From a practical perspective, these findings have significant implications for healthcare administrators and policymakers. Prioritizing investments in staff training to enhance empathy and responsiveness can yield substantial improvements in patient satisfaction. Additionally, maintaining high-quality physical facilities, while secondary to interpersonal factors, remains a valuable strategy for enhancing the patient experience. The strong correlations observed among the SERVQUAL dimensions (ranging from $r = 0.710$ to $r = 0.943$) further suggest that improvements in one dimension, such as empathy, may positively influence perceptions of other dimensions, creating a synergistic effect on overall service quality. The study's limitations include its focus on a single geographic region, which may limit the generalizability of findings to other cultural or healthcare contexts. Furthermore, the lack of significant effects for Reliability and Assurance warrants further investigation to determine whether these dimensions may play a more prominent role in different settings or with larger, more diverse samples. Future research could explore longitudinal designs to assess how patient expectations evolve over time or conduct comparative studies across public and private healthcare institutions to identify sector-specific dynamics.

 In conclusion, this study highlights the critical importance of empathy and responsiveness as the cornerstones of patient satisfaction in the healthcare sector. By fostering a patient-centered approach that emphasizes compassionate care and timely service delivery, healthcare institutions can significantly enhance patient experiences, foster loyalty, and improve overall health outcomes. Strategic focus on these dimensions, alongside improvements in tangible aspects of service delivery, offers a robust pathway for healthcare providers to align their services with patient expectations and deliver high-quality, satisfying care.

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