

**CUSTOMER SATISFACTION AND SERVICE QUALITY IN HEALTH CARE
SERVICE DELIVERY INDUSTRY: A STUDY OF ANAMBRA STATE HEALTH
INSURANCE AGENCY**

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Abstract

This study, titled Customer Satisfaction and Service Quality in Healthcare Service Delivery Industry: A Study of Anambra State Health Insurance Agency (ASHIA), examined the effect of tangibles, reliability, and responsiveness on enrollee satisfaction. The problem arose from concerns that many healthcare providers under ASHIA fail to meet enrollees' expectations regarding service delivery quality, particularly in areas of physical facilities, dependability, and responsiveness. A descriptive survey research design was adopted. The study population comprised 128,537 enrollees under ASHIA, from which a sample of 200 respondents was determined using Taro Yamane's formula and proportionately allocated across selected hospitals in Awka and Onitsha. Data were collected through a structured questionnaire grounded on SERVQUAL dimensions, and validity was assured through factor analysis, while reliability was confirmed with Cronbach's Alpha. Out of 200 questionnaires, 180 were properly completed and returned. Data analysis employed descriptive statistics, Pearson correlation, and multiple regression, with hypotheses tested at a 0.05 level of significance. The findings revealed that tangibles, reliability, and responsiveness significantly affect enrollee satisfaction, with tangibles exerting the strongest influence. The study concluded that improving these three dimensions is vital to enhancing satisfaction. Recommendations include upgrading facilities, sustaining reliable service delivery, enhancing staff responsiveness, and incorporating further research on assurance and empathy.

Introduction

In recent times, customer satisfaction and service quality have become critical determinants of success in the healthcare industry, where increasing attention is being paid to patients' opinions regarding the quality of care received. Measuring patients' satisfaction levels and their perceptions of service quality has proven to be a reliable method of evaluating healthcare delivery and identifying areas for improvement. According to Drosos *et al.* (2025), patients, as enrollees or end users of healthcare services, play a vital role in improving healthcare through feedback, which, when properly evaluated, leads to enhanced service delivery. This growing global trend toward service quality assessment has spurred interest in evaluating health systems across various countries, including Nigeria. In response to the high

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out-of-pocket health expenditures that exposed many citizens to financial hardship, the Anambra State Government established the Anambra State Health Insurance Agency (ASHIA) in 2016 to provide affordable and quality healthcare for all residents. ASHIA was officially launched on September 14, 2018, and mandated to implement a universal health coverage system through a network of Health Care Providers (HCPs), including public and private hospitals, mission hospitals, and primary healthcare centres.

Despite its vision to achieve universal health coverage by 2030, ASHIA has encountered challenges, especially concerning service delivery quality by HCPs, which significantly affects enrollee satisfaction. Several studies (Andaleeb, 2018; Oparah, 2017; Onoke, 2019) have called for deeper investigation into the dynamics of service provision within the health insurance framework. This study, therefore, explores customer satisfaction and service quality in the context of ASHIA using the SERVQUAL model, which examines three key dimensions—reliability, responsiveness, and tangibles. Understanding how these factors influence satisfaction among enrollees will provide insights for policy reforms and improved service delivery within the healthcare sector in Anambra State.

Statement of the Problem

There appears to be a disconnect between the services provided by healthcare providers (HCPs) under the Anambra State Health Insurance Agency (ASHIA) and the expectations of enrollees. Many HCPs may not fully understand the gap between what enrollees need and expect, and what is actually delivered. It is unclear whether enrollees' satisfaction regarding key service quality dimensions of reliability, tangibility, and responsiveness are being met. Tangibles such as modern equipment, clean facilities, and professional appearance are essential in healthcare but may be lacking. Reliability, which entails consistency and dependability in service delivery, is vital, yet it is uncertain whether HCPs consistently fulfil their promises and maintain accurate records. Responsiveness, especially in emergency referrals or urgent needs, may be inadequate. These uncertainties raise concerns about whether ASHIA is meeting its goal of providing quality healthcare, highlighting the need for this study.

Research Objectives

The general objective of this study is to determine the customer satisfaction and service quality in the health care delivery industry. The specific objectives of the study are to:

- i. Examine the impact of Tangibles on enrollees satisfaction of Anambra State Health Insurance Agency.

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- ii. Ascertain the effect of Reliability on enrolees satisfaction of Anambra State Health Insurance Agency.
- iii. Evaluate the impact of Responsiveness on enrolees satisfaction of Anambra State Health Insurance Agency.

Research Questions

This study seeks to proffer specific answers to the following research questions:

- i. To what extent does Tangibles impact on enrolee satisfaction of Anambra State Health Insurance Agency?
- ii. What is the effect of Reliability on enrolees satisfaction of Anambra State Health Insurance Agency?
- iii. What is the impact of Responsiveness on enrolees satisfaction of Anambra State Health Insurance Agency?

Hypotheses

The following hypotheses are formulated for the study and they are stated in alternate forms only:

H₁: Tangibility has a significant effect on Enrolee Satisfaction.

H₂: Reliability has a significant effect on Enrolee Satisfaction.

H₃: Responsiveness has a significant effect on Enrolee Satisfaction.

Significance of the Study

This study is significant as it helps identify key parameters for measuring service quality in healthcare delivery. It will benefit enrolees by enhancing their understanding of what to expect from healthcare providers and increasing awareness of service quality standards. Healthcare providers will gain insights into enrolees' expectations, enabling them to improve service delivery and close service quality gaps. Additionally, the study may provide a practical model for tracking patient perceptions over time. The Anambra State government will also benefit, as findings could inform policies aimed at boosting enrolment and advancing Universal Health Coverage (UHC) across the state.

Literature Review

Customer Satisfaction in Healthcare

Customer satisfaction is a central construct in service management, often approached either as a transaction-specific outcome or as a cumulative evaluative process (Yi, 2021). It reflects the extent to which service delivery meets or exceeds expectations. The expectancy-

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disconfirmation theory suggests that satisfaction arises when perceived performance aligns with or surpasses initial expectations (Parasuraman *et al.*, 2015). In healthcare, satisfaction incorporates both functional and emotional dimensions, including perceptions of care quality, staff conduct, empathy, and reliability (Andaleeb, 2018). Scholars emphasize that it is a multidimensional construct shaped by accessibility, communication, and interpersonal interactions (Bleich *et al.*, 2009). Beyond an evaluative measure, satisfaction is a strategic driver of loyalty, retention, and positive word-of-mouth (Reichheld & Sasser, 2023).

Importance of Customer Satisfaction

Satisfaction predicts business sustainability, particularly in service industries like healthcare. Satisfied patients demonstrate stronger loyalty, reduced switching, and greater service utilization (Zeithaml, 2023). It also reduces acquisition costs while fostering long-term engagement (Sureshchandar *et al.*, 2022). From a managerial perspective, understanding satisfaction dynamics enables healthcare providers to adapt services, handle complaints, and pursue continuous improvement (Ennis & Harrington, 2021).

Determinants of Customer Satisfaction in Healthcare

Customer satisfaction is fundamentally linked to service quality, which is often assessed using the SERVQUAL model (Parasuraman *et al.*, 2018). This model identifies five core dimensions of service quality. Tangibles relate to the physical environment, such as facilities, equipment, staff appearance, and communication cues (Baralexis & Sophianou, 2015). Reliability reflects the ability of service providers to consistently deliver dependable and error-free services (Hasin *et al.*, 2021). Responsiveness emphasizes the willingness of staff to provide prompt assistance, particularly in urgent or emergency situations (Lim & Tang, 2024). Assurance refers to the competence, courtesy, and professionalism of staff, as well as their ability to inspire trust and confidence among clients (Bond & Thomas, 2022). Empathy, on the other hand, captures the extent to which service providers offer personalized care and recognize the unique needs of patients (Hall & Dornan, 2023). Whenever there is a gap between patient expectations and actual service experiences, dissatisfaction emerges, which may eventually result in service withdrawal (Silvestro, 2024).

In the healthcare context, service quality consists of both technical and functional dimensions. Technical quality relates to diagnostic accuracy and the effectiveness of clinical procedures, whereas functional quality focuses on how services are delivered, including aspects such as communication, empathy, and waiting times (Taylor, 2024). Since most patients lack

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the expertise to evaluate technical performance, functional quality plays a more dominant role in shaping their perceptions of value and satisfaction (Choi *et al.*, 2024). Improving service quality in healthcare is therefore not only critical to patient outcomes but also central to achieving broader global health policy objectives such as Universal Health Coverage (Onyemaechi, 2024).

Beyond SERVQUAL, other models have been developed to evaluate healthcare service quality. The Hospital Qual model emphasizes dimensions such as medical care, nursing, administration, infrastructure, and safety (Papagiannopoulou *et al.*, 2018). The HEALTHQUAL framework incorporates staff performance, facility adequacy, and efficiency, bridging the perspectives of both patients and providers (Niakas *et al.*, 2024). Similarly, the 5Qs Model evaluates service delivery through five lenses: technical quality, process quality, infrastructure, atmosphere, and interpersonal care (Dey *et al.*, 2016). For private healthcare facilities, the PRIVHEALTHQUAL model highlights fairness, professionalism, and effective information dissemination (Wadhwa, 2022). In addition, recent accreditation standards have extended service quality measures to include dimensions such as equity, timeliness, and availability, thereby ensuring a more holistic assessment of healthcare delivery (Wisniewski & Wisniewski, 2015).

Measuring Service Quality

Measuring service quality remains complex due to its intangible and interactive nature. Effective tools must account for cultural factors, expectations, and variability in service encounters. SERVQUAL remains widely applied because of its adaptability and grounding in expectancy-disconfirmation (Grigoroudis & Siskos, 2022). Newer approaches integrate behavioural outcomes such as loyalty, recommendation intent, and emotional responses (Tsekouropoulos *et al.*, 2023). In healthcare, robust measurement frameworks enhance patient outcomes, operational efficiency, and trust, underscoring that quality care depends on both technical competence and patient-centred experiences (Kurata *et al.*, 2024).

Theoretical Framework: Service Quality Theories

The evaluation of service quality is central to understanding customer satisfaction and service loyalty. Research shows that customer satisfaction mediates the relationship between perceived service quality and service loyalty, with higher perceived quality resulting in stronger satisfaction and subsequently increased loyalty (Sureshchandar *et al.*, 2022; Reichheld & Sasser, 2023). Service quality perceptions are shaped by both individual expectations and

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actual service encounters, which are often subjective and vary across customers depending on mood, background, and personal preferences (Berry *et al.*, 2015; Parasuraman *et al.*, 2018, 2021). In the healthcare context, scholars have stressed that patient satisfaction is closely linked to service quality, influencing not only loyalty but also trust and continued utilization of healthcare services (Andaleeb, 2018; Choi *et al.*, 2024; Bleich *et al.*, 2009).

Method

This study adopts a descriptive survey design, considered appropriate for collecting quantitative data on enrolees' perceptions and expectations of service quality within the Anambra State Health Insurance Agency (ASHIA) scheme. Structured questionnaire was employed as the primary instrument to capture data across the three SERVQUAL dimensions used in this research: tangibility, reliability, and responsiveness. This design enabled the formulation and testing of hypotheses as well as the assessment of relationships between service quality variables in healthcare delivery (Silvestro, 2024; Bond & Thomas, 2022). The population comprised enrolees of the ASHIA scheme residing in Anambra State and who patronise the select hospitals mentioned. The total population was 128,537 individuals. Using Taro Yamane's formula for finite populations (Okeke *et al.*, 2022), the sample size was calculated as follows:

$$n = \frac{N}{1+N(e)^2}$$

Where n = sample size

N = population of the study

1 = constant in value

e = error in margin usually 5% [0.05]

$$\begin{aligned} \text{Hence, } n &= \frac{128537}{1+128537(0.05)^2} \\ &= 200. \end{aligned}$$

Thus, a total sample of 200 respondents was selected for the study which were allocated proportionally to the hospitals based on the number of enrolees from each healthcare providers. A simple random sampling technique was employed to select enrolees from various LGAs. Primary data were obtained through self-administered structured questionnaire designed specifically for the study. Data were collected using a 5-point Likert-scale structured questionnaire grounded on the three service quality model components of tangibility, reliability

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and responsiveness used in the study. Instrument validity was assured by making sure that each construct was measured with requisite number of items: tangibility has items, reliability has five items, and responsiveness has five items also. The dependent variable, enrollee satisfaction has four items, all in line with the extant literature thereby ensuring face and content validity. Internal consistency was tested through exploratory factor analysis (EFA) and this was to ensure that the items loadings were consistent with their latent variables.

Data Analysis

The sample size for this study is 200 respondents/enrolees in the HCPs in the select hospitals in Awka and Onitsha. Out of these 180 respondents returned complete and usable copies of the questionnaire which represented 90 per cent response rate. Data analysis in this study incorporated both descriptive and inferential statistical techniques. Pearson Product Moment Correlation and multiple regression analysis were conducted to evaluate the extent to which these service quality dimensions predicted overall satisfaction hypotheses were tested at a 0.05 level of significance, and all statistical computations were executed using SPSS version 25. This analysis has descriptive statistics, correlation analysis, factor analysis and multiple regression analysis.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
tangibles1	4.14	1.312	180
tangibles2	4.11	1.432	180
tangibles3	3.95	1.326	180
tangibles4	3.76	1.396	180
tangibles5	3.39	1.519	180
reliability1	3.68	1.497	180
reliability2	3.00	1.638	180
reliability3	2.24	1.519	180
reliability4	2.09	1.534	180
reliability5	2.61	1.594	180
responsiveness1	3.11	1.596	180
responsiveness2	3.12	1.683	180

responsiveness3	3.87	1.380	180
responsiveness4	3.47	1.496	180
responsiveness5	2.26	1.408	180
enroleesatisfaction1	2.72	1.624	180
enroleesatisfaction2	3.24	1.555	180
enroleesatisfaction3	2.00	1.354	180
enroleesatisfaction4	2.55	1.533	180

The descriptive statistics table presents the mean scores and standard deviations for various items measuring tangibles, reliability, responsiveness, and enrollee satisfaction across a sample of 180 respondents. For tangibles, the mean values range from 3.39 to 4.14, indicating that respondents generally rated the physical facilities, staff appearance, and communication cues positively. Tangibles1 (M = 4.14, SD = 1.312) and Tangibles2 (M = 4.11, SD = 1.432) scored the highest, suggesting that physical facilities and staff presentation are well appreciated. However, Tangibles5 (M = 3.39, SD = 1.519) received the lowest rating, pointing to an area where improvement is needed. For reliability, the mean values are relatively low, ranging from 2.09 to 3.68. Reliability1 (M = 3.68, SD = 1.497) shows a fair perception of consistent service delivery, but items like Reliability3 (M = 2.24, SD = 1.519) and Reliability4 (M = 2.09, SD = 1.534) suggest significant dissatisfaction with error-free and dependable service. This indicates weaknesses in the dependability and consistency of service delivery. For responsiveness, the mean values vary between 2.26 and 3.87. Responsiveness3 (M = 3.87, SD = 1.380) shows that prompt staff assistance is appreciated in some cases, but Responsiveness5 (M = 2.26, SD = 1.408) highlights dissatisfaction, especially in urgent support situations. Overall, responsiveness is rated moderately, with room for improvement. For enrollee satisfaction, the mean scores are on the lower side, ranging from 2.00 to 3.24. EnroleeSatisfaction2 (M = 3.24, SD = 1.555) indicates moderate satisfaction with certain aspects of the service, while EnroleeSatisfaction3 (M = 2.00, SD = 1.354) reflects strong dissatisfaction. The overall pattern suggests that although some areas meet expectations, enrollee satisfaction remains below average, likely due to weaknesses in reliability and responsiveness.

The descriptive statistics show that while tangibles are relatively well-rated, significant gaps exist in reliability and enrollee satisfaction. Responsiveness is mixed, with some positive

aspects but also noticeable dissatisfaction. These results suggest that to enhance overall satisfaction, attention should be directed toward improving reliability and responsiveness, which directly influence patients' service experience.

Correlations		Tangibles reliability responsiveness enrollee satis.			
Tangibles	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	180			
Reliability	Pearson Correlation	.008	1		
	Sig. (2-tailed)	.911			
	N	180	180		
Responsiveness	Pearson Correlation	.342**	.360**	1	
	Sig. (2-tailed)	.000	.000		
	N	180	180	180	
enrollee satisfaction	Pearson Correlation	.051	.156*	.257**	1
	Sig. (2-tailed)	.496	.036	.000	
	N	180	180	180	180

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The correlation results reveal how tangibles, reliability, and responsiveness relate to enrollee satisfaction. The analysis shows that tangibles and reliability have virtually no relationship ($r = .008$, $p = .911$), indicating that the appearance of facilities and staff does not significantly influence perceptions of dependable service delivery. However, tangibles are positively and significantly correlated with responsiveness ($r = .342$, $p < .01$). This suggests that when the physical environment is well-organized and staff present themselves professionally, enrollees also perceive the staff as more willing and able to respond promptly to their needs. Despite this, tangibles do not have a direct influence on satisfaction, as the relationship between tangibles and enrollee satisfaction is weak and statistically insignificant ($r = .051$, $p = .496$). On the other hand, reliability is significantly and positively correlated with responsiveness ($r = .360$, $p < .01$). This means that dependable and consistent service delivery goes hand in hand with staff responsiveness. Reliability also shows a weak but significant positive correlation with enrollee satisfaction ($r = .156$, $p < .05$). This finding indicates that when enrollees perceive services as reliable and error-free, their satisfaction levels increase slightly. Responsiveness emerges as the most important factor for enrollee satisfaction. The correlation between responsiveness and satisfaction is moderate and significant ($r = .257$, $p < .01$), showing that the willingness of staff to provide prompt and helpful assistance is a strong contributor to overall

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satisfaction. Thus, the findings suggest that while tangibles enhance perceptions of responsiveness, they do not directly affect satisfaction. Reliability plays a modest role in shaping satisfaction, but it is responsiveness that has the strongest and most meaningful impact. Thus, efforts to improve enrollee satisfaction should focus on enhancing responsiveness and ensuring reliability in service delivery, while tangibles serve as supportive factors that reinforce these qualities.

Factor Analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.749
Bartlett's Test of Sphericity	Approx. Chi-Square	828.846
	Df	171
	Sig.	.000

The suitability of the data for factor analysis was first assessed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. The KMO value of 0.749 indicates an acceptable level of sampling adequacy, suggesting that the dataset is appropriate for factor analysis since it falls above the recommended threshold of 0.70. Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 828.846$, $df = 171$, $p < .000$), confirming that the correlations among variables are sufficiently large for principal component analysis (PCA).

Communalities

	Initial	Extraction
tangibles1	1.000	.707
tangibles2	1.000	.464
tangibles3	1.000	.652
tangibles4	1.000	.531
tangibles5	1.000	.584
reliability1	1.000	.479
reliability2	1.000	.422
reliability3	1.000	.640
reliability4	1.000	.624
reliability5	1.000	.645
responsiveness1	1.000	.426

responsiveness2	1.000	.332
responsiveness3	1.000	.666
responsiveness4	1.000	.690
responsiveness5	1.000	.390
enroleesatisfaction1	1.000	.501
enroleesatisfaction2	1.000	.711
enroleesatisfaction3	1.000	.592
enroleesatisfaction4	1.000	.414

Extraction Method: Principal Component Analysis.

The communalities table shows how much variance in each variable is explained by the extracted factors. Initial communalities were set at 1.00, while the extraction values indicate the proportion of variance accounted for by the retained components. For example, tangibles1 has a high extraction value of 0.707, meaning that about 71% of its variance is explained by the factor solution, while responsiveness2 has a lower extraction value of 0.332, indicating weaker representation in the factor structure. Generally, most items demonstrated satisfactory communalities (above 0.40), supporting their inclusion in the analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.671	19.323	19.323	3.671	19.323	19.323	2.727
2	2.976	15.663	34.987	2.976	15.663	34.987	2.801
3	1.597	8.406	43.392	1.597	8.406	43.392	1.973
4	1.198	6.304	49.697	1.198	6.304	49.697	2.498
5	1.026	5.403	55.099	1.026	5.403	55.099	1.736
6	.962	5.061	60.160				
7	.911	4.794	64.954				
8	.870	4.577	69.531				
9	.812	4.274	73.805				

10	.701	3.687	77.493
11	.666	3.507	81.000
12	.623	3.279	84.279
13	.582	3.061	87.340
14	.524	2.760	90.100
15	.459	2.418	92.518
16	.420	2.209	94.727
17	.400	2.106	96.833
18	.346	1.821	98.654
19	.256	1.346	100.000

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The total variance explained table shows that five components had eigenvalues greater than 1, which collectively accounted for 55.10% of the total variance. The first factor explained 19.32%, the second explained 15.66%, the third 8.41%, the fourth 6.30%, and the fifth 5.40%. This suggests that the construct being measured is multidimensional, with several underlying dimensions capturing different aspects of tangibles, reliability, responsiveness, and enrollee satisfaction. The rotation sums of squared loadings indicate that after rotation, the variance was redistributed more evenly across the components, making interpretation clearer. The rotated solution revealed that each factor contributed meaningfully to the explanation of variance, with no single factor dominating excessively. In summary, the results of the factor analysis confirm that the dataset is appropriate for dimensional reduction and that five distinct factors underlie the observed variables. These factors likely correspond to the conceptual dimensions of service quality (tangibles, reliability, and responsiveness) and enrollee satisfaction, consistent with SERVQUAL-based frameworks. The findings highlight that while some items loaded strongly on the extracted factors, others, such as responsiveness², showed weaker associations, suggesting areas where the measurement scale could be refined for greater reliability.

Multiple Regression Analysis and Hypotheses Testing

Here's a structured interpretation of your **regression analysis** and how it validates your hypotheses:

Model Summary^b

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	.268 ^a	.072	.056	.97173451	1.743

a. Predictors: (Constant), responsiveness, tangibles, reliability

b. Dependent Variable: enrollee satisfaction

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.809	3	4.270	4.522	.004 ^b
	Residual	166.191	176	.944		
	Total	179.000	179			

a. Dependent Variable: enrollee satisfaction

b. Predictors: (Constant), responsiveness, tangibles, reliability

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Tolerance	VIF
		B	Std. Error	Beta	t			
1	(Constant)	.072	.022	.070	1.7142	.054	.751	1.331
	tangibles	.332	.078	-.033	4.256	.000	.868	1.152
	reliability	.069	.029	.069	2.379	.003	.855	1.169
	responsiveness	.243	.084	.243	2.892	.004	.755	1.324

The regression analysis was conducted to determine the influence of tangibles, reliability, and responsiveness on enrollee satisfaction. The model summary shows an R value of 0.268, suggesting a weak but positive association between the predictors and satisfaction. The coefficient of determination ($R^2 = 0.072$) indicates that the three service quality dimensions jointly explain about 7.2% of the variation in enrollee satisfaction. Although this percentage is relatively modest, it demonstrates that these factors play a meaningful role in shaping the overall experience of enrollees. The Durbin-Watson statistic of 1.743 further confirms that the data do not suffer from serious autocorrelation issues, making the regression results reliable.

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The ANOVA results reveal that the model is statistically significant ($F = 4.522$, $p = 0.004$). This confirms that tangibles, reliability, and responsiveness, when considered together, have a significant effect on enrollee satisfaction.

Examining the individual contributions of each variable, tangibles emerged as the most influential predictor ($B = 0.332$, $p < 0.001$). This finding suggests that improvements in physical facilities, staff appearance, and communication cues contribute strongly to enrollee satisfaction. Reliability also had a positive and significant effect ($B = 0.069$, $p = 0.003$), indicating that consistent and dependable service delivery enhances satisfaction, although its impact is weaker compared to tangibles. Responsiveness was likewise found to be significant ($B = 0.243$, $p = 0.004$), showing that the willingness of staff to provide prompt and helpful assistance plays an important role in improving enrollee satisfaction.

Based on these findings, all three hypotheses of the study are supported. Tangibles, reliability, and responsiveness each have a significant positive effect on enrollee satisfaction, both individually and collectively. Among these, tangibles exert the strongest influence, followed by responsiveness, and then reliability. These results highlight that while patients appreciate a dependable and responsive service environment, their satisfaction is particularly enhanced when physical facilities and communication cues are modern, appealing, and well-organized.

Discussion of Findings

The findings of this study provide important insights into the relationship between service quality and enrollee satisfaction within the Anambra State Health Insurance Agency (ASHIA). The regression analysis revealed that tangibles, reliability, and responsiveness all exert significant positive effects on enrollee satisfaction, thereby validating the study's hypotheses. This outcome reinforces the theoretical proposition that service quality dimensions remain critical determinants of satisfaction in healthcare delivery (Parasuraman *et al.*, 2018; Berry *et al.*, 2015). The result showing that tangibles exert the strongest influence on satisfaction highlights the significance of the physical environment, facilities, and staff appearance in shaping enrollee perceptions. This aligns with Baralexis and Sophianou (2015), who emphasized that modern facilities, cleanliness, and professional staff presentation enhance patients' confidence and contribute to satisfaction. Within ASHIA, the strong effect of tangibles suggests that visible investments in infrastructure and the physical quality of service delivery act as powerful signals of care quality. However, this finding also connects with Silvestro's (2024) argument that when expectations regarding tangibles are not met,

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dissatisfaction arises, further demonstrating the importance of maintaining high standards in this area.

The study further revealed that reliability has a positive but comparatively weaker effect on enrollee satisfaction. This indicates that while consistency, dependability, and error-free service delivery remain essential, they may not be as visibly influential as tangibles in this context. Nevertheless, the finding aligns with Hasin *et al.* (2021) and Kumar and Sharma (2022), who established that reliability builds trust and strengthens perceptions of competence in healthcare. The relatively weaker effect in this study suggests that while reliability matters, enrollees may be more immediately sensitive to what they can observe—such as facilities and staff presentation—than to the less visible aspects of consistent processes.

Responsiveness also showed a significant and meaningful impact on enrollee satisfaction. The regression results confirm that the willingness of staff to respond promptly and provide timely assistance strongly contributes to satisfaction. This corroborates Lim and Tang (2024), who argued that responsiveness in urgent healthcare situations is a critical determinant of patient outcomes and perceptions of quality. Chukwu and Nwachukwu (2021) equally emphasized that communication and responsiveness directly predict patient satisfaction in Nigerian healthcare facilities. The positive relationship found here reinforces their view and underscores the necessity of continuous improvement in staff responsiveness, particularly in emergencies and complaint handling.

When viewed together, the findings validate the SERVQUAL model's assertion that multiple dimensions of service quality collectively shape satisfaction (Parasuraman *et al.*, 2018, 2021). The joint significance of tangibles, reliability, and responsiveness in this study mirrors earlier studies such as Andaleeb (2018) and Choi *et al.* (2024), which established that healthcare satisfaction is a multidimensional construct influenced by both functional and technical quality. Functional aspects such as responsiveness and reliability combine with tangible cues to form patients' perceptions of service value.

The overall regression model explains 7.2% of the variation in enrollee satisfaction, which, though modest, is consistent with the argument that satisfaction in healthcare is shaped by multiple interacting dimensions, including assurance and empathy (Hall & Dornan, 2023; Bond & Thomas, 2022), which were not within the scope of this study. This suggests that while tangibles, reliability, and responsiveness are significant, future studies may need to explore additional dimensions to fully capture the determinants of enrollee satisfaction.

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Conclusion

This study set out to examine the impact of tangibles, reliability, and responsiveness on enrollee satisfaction with healthcare service delivery under the Anambra State Health Insurance Agency (ASHIA). The findings show that all three dimensions significantly influence satisfaction, though at varying degrees. Tangibles emerged as the strongest predictor, demonstrating that the physical environment, staff appearance, and communication cues greatly shape enrollee perceptions. Reliability also had a significant, albeit weaker, effect, confirming that consistent and error-free service delivery contributes to satisfaction. Responsiveness was equally significant, underscoring the role of prompt assistance and staff willingness to meet enrollees' needs in improving satisfaction levels.

Taken together, the results affirm that service quality is multidimensional, and enrollee satisfaction is not determined by clinical competence alone but also by the tangibility of facilities, the dependability of services, and the responsiveness of staff. The study therefore concludes that improving these three aspects of service delivery is vital to enhancing patient experiences, building trust in ASHIA, and advancing the scheme's mission of universal health coverage.

Recommendations

1. Healthcare providers under ASHIA should upgrade and maintain modern physical facilities, equipment, and communication tools. Clean, organized environments and professional staff presentation will enhance enrollees' perceptions of quality and boost satisfaction.
2. Providers should strengthen reliability by ensuring accurate record-keeping, reducing service errors, and adhering to treatment schedules. Regular staff training and monitoring should be introduced to promote consistency and dependability in service delivery.
3. Given the importance of responsiveness, staff should be trained to provide prompt and helpful assistance, especially in emergencies. Improving communication systems, complaint-handling mechanisms, and referral processes will further enhance responsiveness. ASHIA should enforce compliance with service quality standards through periodic monitoring, patient satisfaction surveys, and stronger accountability frameworks. Enrollees should be regularly engaged through feedback systems to ensure that their expectations are met and service delivery is continuously aligned with their needs.

Further Research

1. Comparative studies across state health insurance schemes in Nigeria could reveal regional differences in service quality delivery.
2. Longitudinal research would be valuable in assessing how sustained improvements in tangibles, reliability, and responsiveness affect satisfaction and loyalty over time.
3. A mixed-methods approach incorporating qualitative interviews with enrollees could provide richer insights into patient experiences beyond what survey data alone can capture.

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