FUDMA JOURNAL OF MANAGEMENT SCIENCES, VOL. 8 NO. 1,
JUNE 2026, ISSN: 2735- 9093

# ENHANCING HEALTHCARE SERVICE QUALITY AND PATIENT SATISFACTION IN DELTA STATE, NIGERIA: A SERVQUAL-BASED EMPIRICAL ANALYSIS

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**Abstract**
This study investigates the relationship between healthcare service quality and patient satisfaction in Delta State, Nigeria, with a view to identifying key service dimensions that influence patient experiences and proposing actionable improvement strategies. Anchored on the SERVQUAL model and Donabedian's quality of care framework, the study adopts a descriptive cross-sectional survey design. Data were collected by administering structured questionnaires to 250 patients selected from public healthcare facilities through convenience sampling technique. The questionnaire was validated through expert review to ensure content validity, while reliability was confirmed using Cronbach's alpha coefficient of 0.75, indicating acceptable internal consistency. Descriptive statistics, Pearson correlation, and multiple regression analysis were employed. The findings revealed a strong and statistically significant relationship between SERVQUAL dimensions and patient satisfaction in public healthcare facilities. Empathy emerged as the strongest predictor, showing that individualized attention and care greatly influence patient satisfaction. Reliability and assurance also significantly enhanced patients' confidence and trust in healthcare services. However, responsiveness was weakened by long waiting times, while tangibility was affected by infrastructural inadequacies and insufficient facilities. The study concluded that improving interpersonal care, dependable service delivery, staff professionalism, operational efficiency, and healthcare infrastructure is essential for enhancing patient satisfaction. Recommendations include continuous staff training, infrastructural investment, reduced waiting time, and effective patient feedback systems.

**Keywords:** Healthcare service quality, patient satisfaction, SERVQUAL, empathy, Nigeria,

## 1. INTRODUCTION

Healthcare systems globally are increasingly evaluated not only on the basis of clinical outcomes but also through patient-centred indicators such as healthcare service quality and patient satisfaction (Al-Harbi et al., 2021; Bolarinwa et al., 2023). Healthcare service quality has evolved into a multidimensional construct that transcends the narrow confines of clinical effectiveness to encompass the totality of patients' experiences within healthcare systems. Contemporary scholarship emphasises that healthcare quality is co-produced through the interaction of structural conditions, provider competence, and relational dynamics that shape patients' perceptions of care (Kruk et al., 2021; WHO, 2022). Within this paradigm, the SERVQUAL framework remains one of the most widely adopted models for assessing healthcare service quality by categorising it into five interrelated dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). These dimensions collectively shape patients' perceptions of care and significantly influence satisfaction outcomes. Tangibles refer to the physical environment of healthcare facilities, including the adequacy of infrastructure, cleanliness, availability of medical equipment, and the appearance of personnel,

all of which often form patients' first impressions and signal institutional credibility. Reliability reflects the consistency, dependability, and accuracy of diagnosis and treatment processes, while responsiveness denotes the willingness and promptness of healthcare providers in addressing patient needs and emergencies. Assurance embodies healthcare providers' professional competence, ethical conduct, courtesy, and ability to instil trust and confidence in patients. Empathy, on the other hand, underscores the provision of individualized, compassionate, and patient-centred care that acknowledges patients' emotional and psychological conditions. Increasingly, these dimensions are being reinterpreted within patient-centred care models where healthcare quality is judged not only by technical outcomes but also by dignity, respect, communication, and emotional support provided during care delivery (Dyer et al., 2022; Nair et al., 2023).

In developing countries such as Nigeria, however, structural and systemic deficiencies continue to undermine the effective delivery of quality healthcare services (Ogbonna & Nwankwo, 2020). Public healthcare institutions are frequently confronted with inadequate infrastructure, shortage of healthcare personnel, insufficient medical equipment, overcrowding, long waiting times, inconsistent care delivery, and weak administrative systems. These deficiencies negatively affect all dimensions of service quality, thereby diminishing patient confidence and satisfaction with healthcare services. In Delta State, these challenges are particularly pronounced, as many public healthcare facilities struggle with operational inefficiencies, poor responsiveness to patient needs, and limited capacity to provide reliable and empathetic care. Consequently, improving healthcare service quality has become a strategic imperative for enhancing patient satisfaction, strengthening healthcare utilization, and achieving equitable and sustainable healthcare delivery within the state.

Patient satisfaction itself is a multidimensional construct reflecting patients' overall evaluation of their healthcare experiences, including communication, timeliness of care, technical competence, interpersonal relationships, and emotional support received during treatment (Khamis & Njau, 2018). High levels of patient satisfaction are associated with improved treatment adherence, increased utilization of healthcare services, stronger patient-provider relationships, and better health outcomes (Dursun & Koksal, 2023). Despite the growing recognition of the importance of healthcare service quality in shaping patient satisfaction, existing studies in Nigeria often generalize findings across regions without adequately accounting for contextual disparities and resource limitations within specific states such as Delta State. Furthermore, insufficient scholarly attention has been devoted to examining the relative influence of individual SERVQUAL dimensions, particularly empathy, assurance, and responsiveness, in resource-constrained healthcare environments. This creates an empirical gap in understanding the specific dimensions of healthcare service quality that most strongly predict patient satisfaction in Delta State. Therefore, this study seeks to provide a context-specific and empirically grounded analysis of how the SERVQUAL dimensions of tangibility, reliability, responsiveness, assurance, and

empathy influence patient satisfaction in selected public healthcare facilities in Delta State, Nigeria.

Despite ongoing healthcare reforms and policy interventions aimed at strengthening healthcare delivery in Nigeria, patient dissatisfaction remains a persistent challenge, particularly within public healthcare facilities (Abimbola et al., 2021). Across many healthcare institutions, patients continue to report poor service experiences associated with inadequate physical facilities and medical equipment, prolonged waiting time, inconsistent and unreliable service delivery, ineffective communication, and limited personalized attention from healthcare providers. These concerns reflect deficiencies across the major SERVQUAL dimensions of tangibility, reliability, responsiveness, assurance, and empathy, all of which are critical determinants of perceived healthcare quality and patient satisfaction. Although previous empirical studies have examined healthcare service quality in Nigeria, many tend to generalize findings across regions without adequately accounting for contextual and socio-economic disparities that shape healthcare experiences in specific states such as Delta State. Furthermore, insufficient scholarly attention has been devoted to understanding the relative contribution of each SERVQUAL dimension, particularly empathy, assurance, and responsiveness, within resource-constrained public healthcare settings where infrastructural deficits, workforce shortages, and operational inefficiencies are prevalent. This limitation creates a significant empirical gap in understanding the specific aspects of healthcare service quality that most strongly influence patient satisfaction and healthcare utilization behaviour in Delta State. Consequently, this study provides a context-specific and empirically grounded assessment of the relationship between healthcare service quality and patient satisfaction by comprehensively examining the influence of tangibility, reliability, responsiveness, assurance, and empathy within selected public healthcare facilities in Delta State, Nigeria.

**Hypotheses**

The following null hypotheses will be tested at 0.01 level of significance:

i. Tangibles have no significant effect on patient satisfaction in Delta State.
ii. Reliability has no significant effect on patient satisfaction in Delta State.
iii. Responsiveness has no significant effect on patient satisfaction in Delta State.
iv. Assurance has no significant effect on patient satisfaction in Delta State.
v. Empathy has no significant effect on patient satisfaction in Delta State.

## 2. LITERATURE REVIEW

### Conceptual Review

#### Healthcare Service Quality

Healthcare service quality has evolved into a multidimensional construct that transcends the narrow confines of clinical effectiveness to encompass the totality of patients' experiences within healthcare systems. Contemporary scholarship emphasises that quality is co-produced through

the interaction of structural conditions, provider competence, and relational dynamics that shape patients' perceptions of care (Kruk et al., 2021; WHO, 2022). Within this paradigm, the SERVQUAL framework continues to offer a robust analytical lens by categorising service quality into five interrelated dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Tangibles capture the physical environment and availability of functional equipment, which often form patients' first impressions and signal institutional credibility. Reliability reflects the consistency and accuracy of diagnosis and treatment, while responsiveness denotes the timeliness and willingness of providers to address patient needs. Assurance embodies professional competence, ethical conduct, and the ability to instil confidence, whereas empathy underscores the provision of individualised, compassionate care that acknowledges patients' emotional and psychological states. Increasingly, these dimensions are being reinterpreted within patient-centred care models, where quality is judged not only by technical outcomes but also by dignity, respect, and effective communication (Dyer et al., 2022; Nair et al., 2023).

Empirical evidence across diverse healthcare contexts consistently affirms the significant influence of these dimensions on patient satisfaction, although their relative salience is context-dependent. Recent studies indicate that in resource-constrained settings, interpersonal elements, particularly empathy and assurance often exert a stronger effect on patient satisfaction than purely structural factors, reflecting the compensatory role of human-centred care in environments with infrastructural limitations (Ameh et al., 2022; Afulani et al., 2021). Conversely, in more advanced health systems, reliability and responsiveness tend to dominate due to higher patient expectations regarding efficiency and precision (Batbaatar et al., 2021). This variability underscores the need for contextualised quality improvement strategies that align service delivery with patient expectations and socio-cultural realities. Moreover, emerging evidence suggests that digital health innovations, including telemedicine and electronic health records, are reshaping traditional service quality dimensions by enhancing accessibility and responsiveness while simultaneously introducing new challenges related to trust and data security (Gopalakrishna-Remani et al., 2021; Mooney et al., 2023). Taken together, these insights reaffirm that healthcare service quality is not a static construct but a dynamic, context-sensitive phenomenon that requires continuous adaptation to evolving patient needs and systemic conditions.

**Patient Satisfaction**

Patient satisfaction is a multidimensional and evaluative construct that captures the extent to which patients' expectations of care are met by their actual healthcare experiences. Contemporary scholarship conceptualises it as a subjective yet systematic appraisal of diverse service encounters, encompassing interpersonal relationships, communication effectiveness, timeliness of care, technical competence, and environmental conditions within healthcare settings (Ferreira et al., 2023; Goodrich & Lazenby, 2023). Rather than being a static outcome, patient satisfaction is shaped by prior expectations, socio-demographic characteristics, and

psychosocial perceptions, including trust in providers and perceived empathy during clinical interactions (Wang et al., 2023; Kalaja, 2023). This underscores its inherently relational nature, where the quality of human interaction often mediates how technical care is interpreted and valued by patients.

Importantly, patient satisfaction functions both as a performance indicator and a behavioural determinant within healthcare systems. Empirical evidence suggests that higher levels of satisfaction are strongly associated with increased patient loyalty, adherence to treatment, and continued utilisation of healthcare services, thereby enhancing overall health outcomes and system efficiency (Olesen & Bathula, 2022; Ferreira et al., 2023). In this regard, patient satisfaction transcends its role as a mere evaluative metric and becomes a strategic tool for healthcare quality improvement and policy formulation. In resource-constrained contexts especially, fostering satisfaction through patient-centred communication, responsiveness, and empathy is critical, as these relational dimensions often compensate for structural deficiencies in healthcare delivery systems. Consequently, patient satisfaction remains a central construct in contemporary healthcare research, linking service quality, patient behaviour, and system performance within an integrated analytical framework.

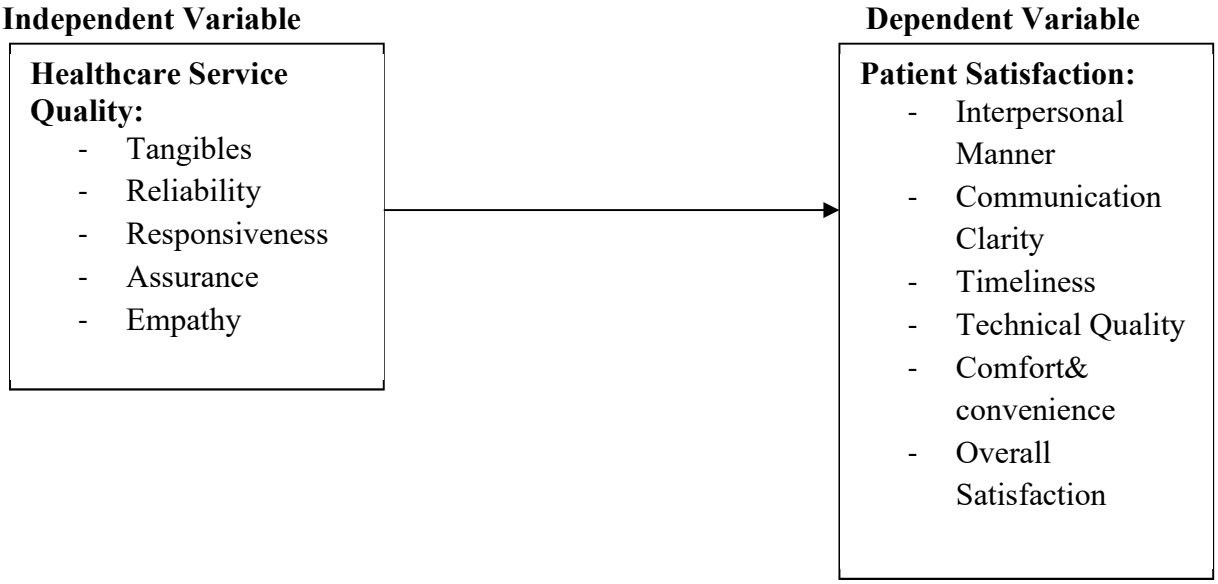


**Figure 1: Conceptual Framework**

**Theoretical Framework**

This study is anchored on the SERVQUAL model developed by A. Parasuraman, Valarie Zeithaml, and Leonard Berry, which conceptualises healthcare service quality as a multidimensional construct shaped by patients' expectations and perceptions of healthcare

experiences. The model evaluates service quality through five interrelated dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Tangibility concerns the adequacy of healthcare infrastructure, equipment, and physical environment; reliability reflects consistent and accurate healthcare delivery; responsiveness focuses on promptness and willingness to meet patients' needs; assurance relates to healthcare providers' competence, professionalism, and ability to inspire trust; while empathy emphasises individualized attention and compassionate care. Contemporary healthcare scholarship continues to validate the relevance of the SERVQUAL model in assessing healthcare quality and patient satisfaction, particularly within patient-centred care systems. Recent studies have shown that the SERVQUAL dimensions significantly influence patient trust, healthcare utilisation, and satisfaction outcomes in both developed and developing healthcare systems (Al-Balas et al., 2024; Garza-Carranza et al., 2024). Similarly, recent empirical evidence indicates that empathy, responsiveness, and assurance are among the strongest predictors of patient satisfaction in healthcare environments characterised by infrastructural and operational constraints (Willie, 2024; Prakash, 2024). The model is therefore considered appropriate for this study because it provides a comprehensive and patient-oriented framework for examining how healthcare service quality dimensions influence patient satisfaction in public healthcare facilities in Delta State, Nigeria.

Recent empirical studies reinforce the relevance of this integrated framework, particularly in developing healthcare contexts. For instance, the application of the Donabedian model in Nigeria and other sub-Saharan settings demonstrates that structural adequacy and process efficiency significantly determine patient outcomes, including satisfaction and perceived quality (Opele & Adepoju, 2024; Setyaningrum et al., 2024). When combined with SERVQUAL, this framework enables a more holistic and patient-centred evaluation, capturing both the technical quality of care and the lived experiences of patients. Furthermore, emerging studies advocate such integrative approaches as essential for addressing contemporary healthcare challenges, including system inefficiencies and patient disengagement, by linking measurable service attributes to broader health system performance (Rafidah et al., 2024). Thus, the synthesis of SERVQUAL and Donabedian not only strengthens theoretical coherence but also enhances the explanatory power of healthcare quality research, making it particularly suitable for empirical investigations in resource-constrained environments.

**Review of Empirical Studies**

Recent empirical scholarship on healthcare service quality in Nigeria reveals a growing consensus that patient satisfaction is significantly shaped by relational and process-oriented dimensions of care. Studies conducted across diverse Nigerian contexts consistently identify responsiveness, communication, and empathy as critical predictors of satisfaction outcomes, reflecting the centrality of interpersonal interactions in healthcare delivery (Adewole et al., 2022; Jibril et al., 2024). More recent analyses employing advanced techniques such as structural

equation modelling further demonstrate that all SERVQUAL dimensions: tangibility, reliability, responsiveness, assurance, and empathy collectively exert a strong and positive influence on patient satisfaction, although their relative weights differ across settings. Notably, emerging evidence from North-Central Nigeria (2026) reinforces this multidimensional influence, while also highlighting the contextual sensitivity of patient perceptions within resource-constrained systems. This body of work underscores a paradigm shifts from purely clinical assessments of healthcare quality towards more holistic, patient-centred evaluations that integrate experiential and perceptual dimensions.

Notwithstanding these contributions, the extant literature is characterised by notable conceptual and methodological limitations that constrain its generalisability and explanatory depth. A significant proportion of studies are concentrated in urban or semi-urban healthcare settings, thereby neglecting rural and underserved populations where service delivery challenges are often more acute (Jibril et al., 2024). Furthermore, many investigations rely on cross-sectional designs with limited analytical sophistication, often failing to rigorously disentangle the individual and interactive effects of SERVQUAL dimensions on satisfaction outcomes . This aggregation tendency obscures nuanced insights into which aspects of service quality are most impactful in specific contexts. Consequently, there remains a clear gap for context-sensitive, methodologically robust studies that disaggregate service quality dimensions while incorporating local healthcare realities. The present study addresses these deficiencies by offering a more granular and empirically grounded analysis within the specific socio-institutional context of Delta State, thereby contributing to both theoretical refinement and policy-relevant evidence.

## 3. METHODOLOGY

A descriptive survey design was adopted to examine patient experiences across selected public healthcare facilities in Delta State, Nigeria. The study utilised a non-probabilistic approach, specifically convenience sampling, to recruit respondents based on their accessibility, availability, and willingness to participate during the period of data collection. Eligible patients in outpatient and inpatient departments were approached consecutively until 250 valid questionnaires were obtained for analysis. The use of convenience sampling is justified by the dynamic nature of healthcare environments, including fluctuating patient flow and operational constraints, and is widely recognised as suitable for hospital-based studies, although it limits generalisability beyond the selected facilities. Data were collected using a structured questionnaire based on the SERVQUAL model dimensions of tangibility, reliability, responsiveness, assurance, and empathy, with reliability confirmed through a Cronbach's alpha of 0.75. Patient satisfaction was analysed as a function of the SERVQUAL constructs using multiple regression, while descriptive and inferential statistics, including Pearson correlation, were used to summarise data and test hypotheses.

## 4. RESULTS AND DISCUSSION

**Table 1: Descriptive Statistics**

| Variable | Mean | Std. Dev. | Interpretation |
|---|---|---|---|
| **Tangibles** | 4.10 | 0.94 | High |
| **Reliability** | 4.26 | 0.84 | Very High |
| **Responsiveness** | 4.08 | 0.96 | High |
| **Assurance** | 4.20 | 0.91 | Very High |
| **Empathy** | 4.30 | 0.86 | Very High |
| **Patient Satisfaction** | 3.99 | 0.89 | Moderate-High |

The descriptive profile presented in Table 1 indicates a consistently favourable evaluation of service quality across all measured dimensions, with mean scores clustering well above the mid-point of the scale and relatively modest standard deviations, suggesting a reasonable degree of consensus among respondents. In particular, reliability (M = 4.26, SD = 0.84), assurance (M = 4.20, SD = 0.91), and empathy (M = 4.30, SD = 0.86) are rated at a very high level, implying that patients perceive healthcare providers as dependable, professionally competent, and sufficiently attentive to individual needs; attributes that are central to trust formation in clinical encounters. Tangibles (M = 4.10, SD = 0.94) and responsiveness (M = 4.08, SD = 0.96), while still rated highly, exhibit slightly greater variability, which may reflect uneven experiences regarding the physical environment and promptness of service delivery across facilities. Notably, overall patient satisfaction records a mean of 3.99 (SD = 0.89), positioning it within the moderate–high range; this marginally lower score, relative to the service quality dimensions, suggests that although patients generally appraise specific aspects of care positively, these do not translate seamlessly into uniformly high satisfaction levels, thereby hinting at the presence of other contextual or systemic factors influencing patients' holistic evaluations of care.

**Table 2: Correlation Matrix**

| Variable | PS | TAN | REL | RES | ASS | EMP |
|---|---|---|---|---|---|---|
| **PS** | 1.000 | | | | | |
| **TAN** | 0.730** | 1.000 | | | | |
| **REL** | 0.816** | 0.722** | 1.000 | | | |
| **RES** | 0.712** | 0.685** | 0.768** | 1.000 | | |
| **ASS** | 0.796** | 0.701** | 0.749** | 0.734** | 1.000 | |
| **EMP** | 0.878** | 0.742** | 0.815** | 0.752** | 0.790** | 1.000 |

Note: $p < 0.01$

Table 2 presents a Correlation Matrix illustrating the strength and direction of associations among patient satisfaction (PS) and the five service quality dimensions, with all coefficients significant at the 0.01 level, thereby indicating robust and non-random relationships. Patient satisfaction exhibits strong positive correlations with empathy (r = 0.878), reliability (r = 0.816),

and assurance (r = 0.796), suggesting that interpersonal care, dependability of service, and professional competence are particularly salient drivers of satisfaction within the sampled healthcare facilities; tangibility (r = 0.730) and responsiveness (r = 0.712) also demonstrate substantial, albeit comparatively moderate, associations, implying that physical facilities and prompt service delivery remain important but somewhat less influential. The intercorrelations among the independent variables are likewise high and positive, for instance, empathy correlates strongly with reliability (r = 0.815) and assurance (r = 0.790), while responsiveness is closely linked with reliability (r = 0.768) pointing to a considerable degree of conceptual and empirical overlap among the SERVQUAL Model dimensions. While these patterns reinforce the multidimensional yet interconnected nature of perceived service quality, they also raise the possibility of multicollinearity in subsequent regression analysis, warranting cautious interpretation of individual parameter estimates despite the overall consistency of the findings.

**Table 3: Regression Results**

| Variable | Beta (β) | t-value | p-value |
|---|---|---|---|
| **Tangibles** | 0.145 | 2.874 | 0.005 |
| **Reliability** | 0.231 | 4.562 | 0.000 |
| **Responsiveness** | 0.118 | 2.201 | 0.029 |
| **Assurance** | 0.207 | 3.998 | 0.000 |
| **Empathy** | 0.289 | 5.898 | 0.000 |

$R^2 = 0.68$ | F-statistic significant at $p < 0.001$

The regression estimates indicate that the model possesses substantial explanatory power, with an $R^2$ of 0.68 implying that approximately 68% of the variance in patient satisfaction is accounted for by the five service quality dimensions, while the statistically significant F-statistic ($p < 0.001$) confirms the overall fitness and robustness of the model. At the individual level, all predictors exert positive and statistically significant effects, suggesting that improvements across each dimension are associated with corresponding increases in patient satisfaction. Empathy emerges as the most influential predictor ($\beta = 0.289$, $t = 5.898$, $p < 0.001$), underscoring the centrality of personalised care, emotional support, and patient–provider rapport in shaping satisfaction outcomes. This is followed by reliability ($\beta = 0.231$, $t = 4.562$, $p < 0.001$) and assurance ($\beta = 0.207$, $t = 3.998$, $p < 0.001$), indicating that consistent service delivery and the competence and credibility of healthcare personnel significantly enhance patients' confidence and overall evaluations of care. Although comparatively weaker, tangibles ($\beta = 0.145$, $t = 2.874$, $p = 0.005$) and responsiveness ($\beta = 0.118$, $t = 2.201$, $p = 0.029$) remain significant contributors, reflecting the importance of physical facilities and prompt service delivery in influencing perceptions. Taken together, the findings suggest a hierarchy of effects in which relational and trust-based dimensions outweigh structural attributes, thereby highlighting the primacy of human-centred care in driving patient satisfaction within the studied healthcare context.

## 4. RESULTS AND DISCUSSION

The findings of this study lend robust empirical support to the enduring proposition within health services scholarship that perceived service quality remains a decisive driver of patient satisfaction, particularly in public healthcare systems. The statistically significant relationships observed across all five dimensions of the SERVQUAL Model resonate strongly with the growing body of international evidence (Mensah et al., 2022; Dursun & Koksal, 2023), which consistently underscores the multidimensional nature of quality perceptions in shaping patient evaluations of care. This convergence suggests that, irrespective of geographical or systemic variations, patients' assessments of tangibility, reliability, responsiveness, assurance, and empathy collectively inform their overall satisfaction. However, beyond mere confirmation of established theory, the present findings advance the discourse by illuminating the relative salience of specific dimensions within contextually constrained health systems.

The finding that reliability recorded a very high mean score (M = 4.26, SD = 0.84) indicates that patients perceive healthcare services as consistent, accurate, and dependable. This aligns with the SERVQUAL expectation that reliability is a core determinant of perceived service quality. The result corroborates recent studies by Al-Balas et al. (2024) and Garza-Carranza et al. (2024), which found that dependable diagnostic and treatment services significantly enhance patient trust and satisfaction in healthcare settings. Similarly, Willie (2024) reported that reliability remains one of the strongest predictors of patient confidence in public hospitals, particularly where continuity of care is critical. The consistency observed in this study therefore reinforces the argument that reliable service delivery is central to positive patient evaluations in resource-constrained healthcare systems.

The result for assurance (M = 4.20, SD = 0.91) shows that patients generally perceive healthcare workers as competent, professional, and capable of instilling trust. This finding is consistent with Prakash (2024), who observed that assurance significantly enhances patient satisfaction by reducing anxiety and increasing confidence in medical outcomes. Likewise, Dyer et al. (2022) emphasized that professional competence and effective communication are critical in building trust within patient-centred care models. In a similar vein, Nair et al. (2023) found that assurance-related factors such as ethical conduct and clarity in communication strongly influence patients' perceived safety in healthcare environments. The present finding therefore confirms that assurance remains a key driver of positive patient experiences in public healthcare facilities.

The high rating for empathy (M = 4.30, SD = 0.86) suggests that patients value individualized attention, compassion, and emotional support from healthcare providers. This aligns strongly with contemporary literature which identifies empathy as a central pillar of patient-centred care. Al-Balas et al. (2024) found that empathetic engagement significantly improves patient satisfaction and treatment adherence, while Garza-Carranza et al. (2024) reported that emotional responsiveness enhances perceived care quality in hospital settings. Furthermore, Kruk et al. (2021) and WHO (2022) emphasise that healthcare quality is not complete without relational and

humanistic dimensions of care. The prominence of empathy in this study therefore reinforces its critical role as the strongest relational determinant of patient satisfaction in clinical interactions.

The findings for tangibles (M = 4.10, SD = 0.94) and responsiveness (M = 4.08, SD = 0.96) indicate generally positive perceptions, though with slightly greater variability across respondents. This suggests inconsistencies in physical infrastructure and responsiveness of care delivery across facilities. This aligns with Ogbonna and Nwankwo (2020), who reported that infrastructural deficits and workforce limitations remain persistent challenges in Nigerian public healthcare systems. Similarly, Scholtz (2021) and Stratton (2021) noted that responsiveness is often compromised in resource-constrained environments due to patient overload and staffing shortages. These findings imply that while patients may appreciate available services, uneven facility conditions and delays in service delivery continue to affect their overall experience of care.

Finally, the finding that overall patient satisfaction (M = 3.99, SD = 0.89) is moderate to high, yet slightly lower than individual SERVQUAL dimensions, suggests a disconnect between perceived service quality components and holistic satisfaction outcomes. This supports Khamis and Njau (2018), who argue that patient satisfaction is a multidimensional construct influenced by both service quality and broader experiential factors. Similarly, Dursun and Koksal (2023) found that even when specific service dimensions are rated positively, systemic inefficiencies such as waiting time and service coordination can reduce overall satisfaction. This implies that in Delta State healthcare facilities, positive perceptions of individual SERVQUAL dimensions do not fully translate into optimal satisfaction, highlighting the influence of broader institutional and systemic constraints on patients' overall evaluation of care.

## 5. CONCLUSION AND RECOMMENDATIONS

In conclusion, the study provides compelling empirical evidence that the quality of healthcare service delivery constitutes a pivotal determinant of patient satisfaction within public health facilities in Delta State, underscoring the multidimensional nature of care beyond mere clinical proficiency. Although technical competence remains an indispensable foundation for effective healthcare outcomes, the findings illuminate the disproportionately greater influence of interpersonal dimensions; most notably empathy in shaping patients' overall experiences, perceptions of care, and subsequent satisfaction levels. This suggests that patients evaluate healthcare encounters not solely on the basis of diagnostic accuracy or treatment efficacy, but also through the quality of human interaction, emotional support, and the extent to which care providers demonstrate genuine concern and understanding. Consequently, the study advances the argument that sustainable improvements in patient satisfaction require a deliberate recalibration of healthcare delivery frameworks to prioritise patient-centred communication, relational competence, and compassionate engagement alongside technical excellence, thereby fostering

trust, enhancing service utilisation, and ultimately contributing to improved health system performance.

Based on the study findings, the following recommendations are proposed to strengthen healthcare service delivery and enhance patient satisfaction outcomes in Delta State:

i. Institutionalise continuous professional development programmes that integrate both clinical proficiency and advanced interpersonal competencies particularly communication, emotional intelligence, and empathy to ensure a holistic enhancement of care delivery.
ii. Prioritise sustained investment in healthcare infrastructure and facility modernisation, with a view to creating safe, functional, and patient-friendly environments that reinforce confidence in public health services.
iii. Implement evidence-based process optimisation strategies, including workflow redesign, task-shifting where appropriate, and digital queue management systems, to significantly reduce patient waiting times and improve service efficiency.
iv. Establish robust, transparent, and responsive patient feedback mechanisms such as real-time satisfaction tracking and grievance redress systems to drive continuous quality improvement and strengthen accountability.
v. Embed patient-centred care models as a core operational philosophy, deliberately foregrounding empathy, respect, and effective communication in all provider–patient interactions to enhance patient experiences and overall satisfaction outcomes.

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