

Evaluation of Patient Satisfaction as a Quality Indicator in the Ophthalmology Service of Hospital Central de San Cristóbal Under the SERVQUAL Quality Model

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Abstract

This study aims to analyze the Ophthalmology Service of the Hospital Central de San Cristóbal to design and propose a systematic tool, based on the SERVQUAL model, aimed at assessing patient satisfaction, thereby transforming user perception into a key indicator for evidence-based clinical management.

➤ Theoretical Framework:

From a theoretical standpoint, the research conceives healthcare quality as a management imperative sustained by user experience, approaching this evaluation from a transcomplexity perspective by understanding that satisfaction is a phenomenon involving medical, administrative, ethical, and human dimensions.

➤ Methodology:

Methodologically, technological-propositive research was developed with a non-experimental, cross-sectional design, employing an 11-item structured instrument with a five-point Likert scale; this tool evaluates the five dimensions of healthcare quality (tangibles, reliability, responsiveness, assurance, and empathy), and its content validity was duly certified through expert judgment.

➤ Results:

Regarding general results, it was evidenced that the dimensions with the greatest strengths were Assurance (mean of 4.61) and Empathy (4.50 and 4.52), which driven a high Global Satisfaction (4.62). In contrast, the areas of opportunity with the lowest scores were Reliability (3.55) and Responsiveness (3.83), heavily affected by unpunctuality and prolonged waiting times.

➤ Conclusions:

Based on these findings, it is concluded that, while the service boasts solid technical and human strengths that generate trust and loyalty, operational inefficiency in time control represents the critical link restricting excellence. Consequently, it is recommended to implement an optimization plan focused on appointment automation and the standardization of care times to consolidate a comprehensive quality service.

Keywords: Patient Satisfaction, SERVQUAL Model, Service Quality, Ophthalmology, Hospital Management, Healthcare Governance.

I. INTRODUCTION

In the current context of hospital management, quality of care has ceased to be a purely clinical aspiration and has transformed into an operational and administrative imperative centered on the user experience. Modern international literature conceptualizes patient satisfaction not merely as a metric of comfort or perceived hospitality, but as a robust predictive indicator of therapeutic adherence, institutional reputation, and systemic efficiency. Nevertheless, across numerous public health institutions, a critical disconnect persists between the technical capacity of medical personnel and the subjective perception of the healthcare user, leaving a substantial gap in comprehensive quality management.

This research is fundamentally anchored in preliminary diagnostic findings obtained within the Ophthalmology Service of the Hospital Central de San Cristóbal (November 2025). This assessment exposed a striking operational paradox: while 100% of administrative and clinical personnel acknowledge the vital necessity of systematic data for operational efficiency, 86.1% of healthcare delivery functions without any formal evaluation of patient satisfaction. This methodological void severely hinders evidence-based decision-making, perpetuating structural inefficiencies such as unstandardized waiting times, scheduling bottlenecks, and a systemic misalignment between service supply and real user requirements.

Facing this reality, institutionalizing the voice of the patient becomes an urgent necessity. The primary objective of this article is to design and propose a systematic, standardized assessment tool structured under the multi-dimensional SERVQUAL quality framework. By embedding this instrument into routine administration, the organization can translate subjective user perceptions into actionable, quantifiable management metrics, facilitating a paradigm shift from intuitive, reactive administration toward evidence-based clinical governance committed to continuous improvement and service excellence.

Addressing the complex operational reality of the Ophthalmology Service at Hospital Central de San Cristóbal necessitates a deliberate departure from traditional, rigid administrative paradigms. Under this perspective, this study adopts a *transcomplex* epistemological stance, recognizing that healthcare quality is a dynamic, multi-referential phenomenon that cannot be reduced to single-variable clinical metrics. Furthermore, it demands rigorous *transdisciplinarity*, converging insights from clinical medicine, public administration, statistical psychometrics, and organizational behavior through the SERVQUAL framework.

This effort is operationalized through a holistic research design that views the hospital as an integrated organic ecosystem, where physical infrastructure, human talent, administrative workflows, and patient subjectivity coexist in continuous interconnection. Ultimately, the proposed tool seeks not only to resolve a local methodological deficiency but also to serve as a transformative instrument for genuine hospital governance, where citizen participation and service co-creation lay the foundation for strategic decision-making, operational transparency, and healthcare excellence across the region.

II. THEORETICAL FRAMEWORK

Within the modern paradigm of New Public Management (NPM), public administration has undergone a profound structural redefinition, shifting from rigid bureaucratic structures toward citizen-centered service delivery models. Under this theoretical framework, the legitimacy of public entities is no longer evaluated solely through compliance with administrative protocols or regulatory mandates, but through their demonstrated capability to generate tangible public value. Consequently, evaluating service quality becomes a core strategic imperative and a direct benchmark of state efficiency, accountability, and operational transparency.

When evaluating critical sectors such as healthcare, quality must be conceptualized through a systemic, multidimensional framework. According to the World Health Organization (WHO, 2025), delivering optimal healthcare services extends beyond individual clinical competence to encompass a supportive regulatory environment, robust clinical governance, sustainable financing mechanisms, and a well-trained, motivated health workforce. Furthermore, the WHO emphasizes the mandatory presence of accessible physical infrastructure, safe technological equipment, and continuous health information systems. Thus, public healthcare quality represents the harmonious alignment of tangible physical assets and intangible human capabilities directed toward social well-being.

To operationalize and measure this complex construct, health systems research extensively utilizes the SERVQUAL model, originally formulated by Parasuraman, Zeithaml, and Berry. Although initially developed for commercial corporate environments, Araujo Romero and López Marrufo (2022) demonstrate that its application within national and international public management is ideal for diagnosing discrepancies between citizen expectations and real service perceptions. The model effectively translates macro-level healthcare guidelines (such as WHO standards) into concrete, evaluate metrics across five core dimensions: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

Table 1 Matrix Aligning WHO Systemic Quality Criteria with SERVQUAL Operational Dimensions and Public Management Focus

SERVQUAL Dimension	WHO Quality Criterion (2025)	Public Management Focus
Tangibles	Accessible facilities, safe medical technologies, and regulated infrastructure.	Evaluation of physical facility state, cleanliness, equipment, and visual materials.
Reliability	Continuous monitoring, information systems, and dependable service delivery.	Capability to execute administrative procedures and clinical consultations accurately and punctually.

Note. Self-elaboration based on World Health Organization (2025) and Araujo Romero & López Marrufo (2022).

Despite an expanding global body of literature on SERVQUAL applications in healthcare, a distinct void of documented empirical studies persists within the Venezuelan public health context. This knowledge gap highlights the critical significance of this study. Building upon local diagnostic antecedents in the Ophthalmology Service of Hospital Central de San Cristóbal (Niño, 2025), this research systematizes a standardized assessment tool designed to establish evidence-based clinical governance. As a pioneering national initiative, this study establishes a methodological benchmark for adapting international quality frameworks to complex local public health environments.

Measuring service quality in public institutions serves as an indispensable pillar for institutional strengthening. Araujo Romero and López Marrufo (2022) highlight that implementing SERVQUAL enables organizations to diagnose current operational realities while systematically optimizing processes for public benefit. Furthermore, empirical findings by Parrales Moyon et al. (2024), where administrative inefficiencies (mean score of 2.73) directly driven user dissatisfaction, reinforce a recurring regional pattern in public healthcare. Quality enhancement depends not only on clinical expertise but equally on administrative formalization and process reliability. The proposed instrument audits both clinical care and administrative workflows, identifying structural bottlenecks that drive patient dissatisfaction.

III. METHODOLOGY

This study is categorized as technological-positive research, centered on designing and structuring an applied technical solution to optimize clinical and administrative processes in healthcare. Because the primary objective focuses on constructing and validating the Patient Satisfaction Scale for Ophthalmology Services, the research extends beyond descriptive analysis to deliver an actionable clinical management tool.

The study employs a non-experimental, cross-sectional design. Variables were observed in their natural operational environment without deliberate experimental manipulation, and data were gathered in a single temporal window to capture current satisfaction levels. This design enables objective systematization of user experiences, yielding an empirical baseline for continuous quality improvement initiatives.

Data collection utilized a structured technical-administrative instrument constructed under SERVQUAL guidelines, containing 11 target items spanning the five core healthcare quality dimensions: Tangibles (items 1–2: infrastructure and equipment), Reliability (items 3–4: punctuality and accuracy), Responsiveness (items 5–6: readiness and waiting times), Assurance (items 7–8: professional competence and safety), and Empathy (items 9–10: humanized treatment and communication).

In psychometric design, an unforced 5-point Likert scale utilizing symmetric option spacing offers optimal granularity for measuring opinion intensity (Trustmary, 2026). Including an explicit neutral midpoint is essential, as it prevents response distortion by not forcing respondents into artificial binary choices—a common methodological flaw in even-numbered formats. Methodological literature validates the 5-point format for its versatility in quantitative extrapolation, variance calculation, and ordinal trend derivation, offering higher completion rates and cognitive clarity compared to complex multi-point alternatives.

The instrument operationalizes a 5-point Likert response format where 1 = "Strongly Disagree" and 5 = "Strongly Agree", offering enhanced statistical sensitivity relative to legacy dichotomous scales. Content validity was rigorously established through expert judgment; a multidisciplinary panel of clinical and administrative experts evaluated item clarity, contextual relevance, and alignment with the operational workflows of the Ophthalmology Service at Hospital Central de San Cristóbal.

IV. RESULTS

The structural design of the survey captures critical touchpoints across technical, human, accessibility, and infrastructure domains, identifying precise operational breakdown points along the hospital's care delivery chain. Integrating these metrics enables administration to transition from intuitive management to an evidence-based operational model. Aligned with transcomplex theory, the empirical data demonstrate that patient satisfaction is a multifaceted phenomenon encompassing clinical skill, administrative efficiency, ethical standards, and humanized care.

Table 2 details the reported arithmetic mean scores, corresponding item distributions, and qualitative interpretations across all evaluated dimensions:

Table 2 Reported Mean Scores, Item Distribution, and Qualitative Interpretation by SERVQUAL Dimension

Dimension	Item Index	Reported Mean Score (μ)	Qualitative Interpretation
Tangibles	Items 1 & 2	3.93 & 4.05	Good
Reliability	Items 3 & 4	3.55 & 4.39	Good
Responsiveness	Items 5 & 6	4.48 & 3.83	High
Assurance	Items 7 & 8	4.61 & 4.61	Very High
Empathy	Items 9 & 10	4.52 & 4.50	Very High
Global Satisfaction	Item 11	4.62	General Satisfaction

Note. Adapted from Niño (2026).

Analysis of user perception reveals an overwhelmingly positive overall evaluation. Assurance and Empathy achieved "Very High" ratings (means of 4.61 and 4.51 average, respectively), establishing them as the institutional pillars of the service. Similarly, Responsiveness earned a "High" qualitative rating, anchored by strong staff willingness in Item 5 (4.48).

Conversely, Tangibles and Reliability were classified as "Good," displaying consistent underlying performance but greater item-level dispersion; while Item 4 in Reliability reached 4.39, Item 3 recorded 3.55—the lowest individual score in the study. Crucially, Global Satisfaction (Item 11) registered 4.62, indicating that despite specific operational friction points, the overall patient experience remains highly positive.

V. DISCUSSIONS

The diagnostic findings highlight major organizational strengths within the public health facility. Patients consistently recognize and value the ethical dedication, technical proficiency, and interpersonal sensitivity of operational staff. The highest-scoring dimensions represent the institution's primary pillars of patient trust:

➤ Global Satisfaction (Item 11 - $\mu = 4.62$):

Attained the highest score in the study, reflecting strong patient loyalty and willingness to recommend the service despite underlying operational friction.

➤ Assurance (Items 7 & 8 - $\mu = 4.61$):

Tied for the second-highest score, confirming deep patient confidence in medical competence, diagnostic safety, and professional excellence.

➤ Empathy (Items 9 & 10 - $\mu = 4.52, 4.50$):

Demonstrated consistently strong performance, reflecting dignified, respectful, and humanized patient-provider interactions. Conversely, comprehensive data analysis identifies critical operational bottlenecks that compromise perceived efficiency. These low-scoring indicators represent priority targets for administrative modernization:

➤ Reliability / Appointment Punctuality (Item 3 - $\mu = 3.55$):

Registered the absolute lowest mean score, identifying schedule adherence and appointment timing as the primary operational vulnerability.

➤ Responsiveness / Wait Times (Item 6 - $\mu = 3.83$):

Highlighted prolonged facility wait times as a key secondary factor diminishing perceived administrative efficiency.

VI. CONCLUSIONS AND RECOMMENDATIONS

This research confirms that the Ophthalmology Service of Hospital Central de San Cristóbal possesses robust human and clinical foundations. High scores in Assurance (4.61) and Empathy (4.51) drive overall patient fidelity, sustaining an impressive Global Satisfaction score of 4.62.

However, administrative and operational efficiency represents the critical bottleneck in service delivery. Low Reliability scores tied to unpunctuality directly undermine quality perceptions. While technical reputation remains exemplary, wait-time management and workflow responsiveness constitute the primary structural barriers to excellence.

➤ To Address these Empirical Findings, the Following Strategic Interventions are Recommended:

• Institutionalize Continuous Monitoring:

Implement the 11-item SERVQUAL tool as a permanent key performance indicator (KPI) to systematically track post-intervention progress toward a target satisfaction mean of 5.00.

• Automate Appointment Scheduling:

Transition from manual scheduling to an automated digital appointment system to eliminate queues and enforce strict time-slot adherence.

• Standardize Care Workflows:

Reengineer patient intake and clinical consultation flows to reduce waiting times (Item 6) and eliminate operational delays (Item 3).

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