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Quality of service and loyalty among chronic patients

Calidad del servicio y fidelización de pacientes crónicos

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Abstract

Providing quality care to patients with chronic diseases is a priority challenge for the Peruvian healthcare system. Beyond clinical treatment, the way in which the service is provided directly influences trust, retention, and continuity of the relationship with the institution. In this context, understanding how the perception of quality impacts patient loyalty is essential. Objective: To analyze the relationship between the quality of hospital service and the loyalty of chronic patients at the Hospital de Vitarte, Lima, during the year 2024. Methods: Quantitative, cross-sectional, and correlational study conducted with 385 adult chronic patients selected through intentional non-probabilistic sampling. Validated questionnaires based on the SERVQUAL model and Likert scales were applied, and the analysis was performed using Spearman's correlation test ($p < 0.05$). Results: 88.1% of participants rated the quality of service positively, and 88.8% expressed a high level of loyalty. The most highly rated dimensions were empathy, assurance, and tangible elements. A strong and significant correlation was found between both variables ($\rho = 0.629$; $p < 0.001$). Conclusions: Empathetic, reliable, and timely medical care strengthens patient commitment to the institution. Improving the user experience, especially in chronic patients, contributes to more humane, continuous, and effective care.

Keywords: quality of service, loyalty, chronic patient.

Resumen

La atención de calidad a pacientes con enfermedades crónicas constituye un desafío prioritario para el sistema de salud peruano. Más allá del tratamiento clínico, la forma en que se presta el servicio influye directamente en la confianza, permanencia y continuidad del vínculo con la institución. En este contexto, comprender cómo la percepción de calidad impacta en la fidelización del paciente resulta fundamental. Objetivo: Analizar la relación entre la calidad del servicio hospitalario y la fidelización del paciente crónico en el Hospital de Vitarte, Lima, durante el año 2024. Métodos: Estudio cuantitativo, transversal y correlacional, realizado con 385 pacientes crónicos adultos seleccionados mediante muestreo no probabilístico intencional. Se aplicaron cuestionarios validados basados en el modelo SERVQUAL y escalas tipo Likert, y el análisis se desarrolló mediante la prueba de correlación de Spearman ($p < 0,05$). Resultados: El 88,1% de los participantes evaluó positivamente la calidad del servicio y el 88,8% manifestó un alto nivel de fidelización. Las dimensiones mejor valoradas fueron la empatía, la garantía y los elementos tangibles. Se halló una correlación fuerte y significativa entre ambas variables ($\rho = 0,629$; $p < 0,001$). Conclusiones: Una atención médica empática, confiable y oportuna fortalece el compromiso

del paciente con la institución. Mejorar la experiencia del usuario, especialmente en pacientes crónicos, contribuye a una atención más humana, continua y efectiva.

Palabras clave: calidad del servicio, fidelización, paciente crónico.

Introduction

The Pan American Health Organization has warned that, despite progress in coverage and financial protection, significant gaps persist in timeliness, dignified treatment, and care continuity, disproportionately affecting individuals with chronic diseases (Organización Panamericana de la Salud, 2016). In Peru, these gaps are exacerbated by a fragmented health system strained simultaneously by communicable diseases and a steady rise in non-communicable chronic pathologies, all within a context of limited resources and high social vulnerability (Del Carmen Sara, 2019). In response, the World Health Organization has proposed integrated, person-centered care models across the life course that emphasize continuity and coordination beyond episodic acute-event resolution (Epping-Jordan et al., 2004; Writing Committee Members et al., 2023).

The literature broadly concurs that quality of care extends beyond technical competence to encompass the patient's subjective experience, reflected in dimensions such as responsiveness, empathy, effective communication, perceived safety, and respect for personal dignity (Pourat et al., 2016). Within this framework, measuring perceived quality using instruments such as the SERVQUAL model, which assesses reliability, responsiveness, assurance, empathy, and tangibles, has become a key tool for service improvement (Parasuraman et al., 1990). Numerous studies have shown that care perceived as reliable, empathetic, and safe correlates with higher satisfaction levels and a greater willingness to maintain affiliation with the institution (Rostami et al., 2018; Shie et al., 2022; Asriani, 2023). Nevertheless, debate continues regarding the interpretation of such "loyalty" in settings where patients have limited alternatives.

In Peru's public hospitals, many chronic patients receive care at facilities near their homes, covered by public insurance, with few realistic options for switching providers due to economic, geographic, or administrative constraints. In these "captive market" scenarios, continued attendance at the same facility may stem from attitudinal components, loyalty, trust, recommendation, positive identification with the service, as well as from necessity, habit, or lack of alternatives (Rostami et al., 2018; Yu et al., 2020; Woratschek et al., 2020). The chronic care literature underscores that empathy, clarity of information, perceived safety, and recognition of patient dignity critically influence adherence, care continuity, and the development of trusting relationships with healthcare teams (Epping-Jordan et al., 2004; Shortell et al., 2017; Benites-Bernabé et al., 2021; Moya-Salazar et al., 2023).

In the Peruvian context, studies on perceived quality in public and private hospital services are available; however, research exploring in detail how chronic patients interpret their affiliation with the institution and the extent to which their continued attendance reflects genuine loyalty versus constrained continuity due to limited alternatives remains scarce (Príncipe Ayala & Santiago Ortega, 2017; Benites-Bernabé et al., 2021). This knowledge gap is particularly relevant in public hospitals characterized by high demand and structural limitations. Rigorous measurement of both perceived service quality and the behavioral and attitudinal manifestations of loyalty is urgently needed to distinguish between loyalty rooted in positive care experiences and retention driven primarily by necessity or lack of options. On this basis, the present study examines the relationship between perceived hospital service quality and loyalty among chronic disease patients treated at Hospital de Vitarte, Lima, during 2024.

Methodology

Study type and design

This investigation adopted a quantitative approach with a non-experimental, cross-sectional, correlational design. This methodological strategy enabled analysis, at a single point in time, of the relationship between patients' perceptions of hospital service quality and their level of loyalty toward the institution.

The target population comprised chronic disease patients attending the outpatient clinic at Hospital de Vitarte, Lima, during 2024 who met predefined inclusion criteria: age ≥ 18 years, confirmed diagnosis of at least one chronic condition (hypertension, type 2 diabetes mellitus, chronic obstructive pulmonary disease, chronic kidney disease, or similar), an active medical record with a minimum of three months of follow-up, and at least two attendances in the three months prior to data collection.

Exclusion criteria included patients with uncompensated cognitive impairments or severe psychiatric disorders, those attending sporadically by referral or consultation, and those who did not authorize use of their

clinical information. From the eligible population, a probability sample of 385 patients was obtained through simple random sampling. Sample size was calculated for a 95% confidence level and a 5% margin of error. Participants were enrolled in the survey after providing informed consent.

Data collection techniques and instruments

Service quality was measured using an adapted version of the SERVQUAL model, validated in hospital contexts, which evaluates five essential dimensions of care: reliability, responsiveness, perceived safety, empathy, and tangible elements (Príncipe Ayala & Santiago Ortega, 2017; Parasuraman et al., 1990). Available literature supports the validity, reliability, and internal consistency of this model in healthcare settings, emphasizing the central role of patient perception in quality assessment and in building more humanized, person-centered services (Karume et al., 2025; Parasuraman et al., 1990).

Patient loyalty was assessed using a five-point Likert scale designed to capture both behavioral and attitudinal dimensions of loyalty: intention to continue receiving care at the hospital, willingness to recommend the service, and overall satisfaction with care received (Epping-Jordan et al., 2004; Pourat et al., 2016). This approach explicitly linked perceived quality with chronic patients' intentions regarding retention and recommendation.

Procedure

Data collection took place between January and March 2024, following formal authorization from the Hospital de Vitarte Directorate. Questionnaires were administered individually in specially arranged settings to ensure privacy and comfort. The process was carried out by trained interviewers skilled both in standardized instrument administration and in respectful treatment of participants. Confidentiality and anonymity of participant information were safeguarded at all stages of the study.

Variable description

Perceived quality was measured using the SERVQUAL model, comprising five dimensions:

- **Reliability:** consistent and accurate fulfillment of promised services.
- **Responsiveness:** promptness in addressing patient demands.
- **Assurance:** professional competence and the confidence it inspires.
- **Empathy:** personalized, attentive, and compassionate care.
- **Tangibles:** physical facilities, equipment, and staff appearance (Príncipe Ayala & Santiago Ortega, 2017; Karume et al., 2025).

Measurement employed a five-level Likert scale, enabling quantification of subjective perceptions. The instrument demonstrated high internal consistency (Cronbach's alpha = 0.89) (Rostami et al., 2018).

Loyalty was conceptualized beyond immediate satisfaction as an emotional and rational bond between patient and institution. It was assessed through indicators of intention to continue care, willingness to recommend the service, and overall satisfaction (Shie et al., 2022; Asriani, 2023). Evidence suggests that perceptions of empathy, competence, and efficiency strengthen trust and continuity of the relationship, particularly among chronic patients requiring ongoing, coordinated follow-up (Organización Panamericana de la Salud, 2016; Epping-Jordan et al., 2004).

Both variables were treated as ordinal, and their association was examined using Spearman's correlation coefficient, appropriate for non-parametric data without normality assumptions.

Data analysis

Data were entered and processed using SPSS version 25. Descriptive statistics (frequencies, percentages, means, and standard deviations) were employed to characterize the participant population. Spearman's correlation test was applied to analyze the association between variables. Statistical significance was set at $p < 0.05$.

Ethical considerations

The study was conducted in accordance with ethical principles for research involving human subjects and received approval from the Ethics Committee of Hospital Lima Este Vitarte (approval code No. 018-2025-CIEI/HLEV).

Results

Descriptive results

The study included 385 chronic disease patients receiving regular care at the Hospital de Vitarte outpatient clinic. Mean age was 54.03 years (±17.59), ranging from 19 to 89 years. Sex distribution was balanced: 195 women (50.78%) and 189 men (49.22%). Regarding marital status, cohabitation predominated (244; 63.38%), followed by marriage (118; 30.65%); smaller proportions identified as single (20; 5.19%) or widowed (3; 0.78%). In terms of educational attainment, over half had completed secondary education (206; 53.51%), followed by incomplete technical training (82; 21.30%), suggesting that most had at least a secondary-level education, though only a minority had completed higher education.

With respect to diagnosis, diabetes mellitus was the most frequent condition (257 patients; 66.75%), followed by hypertension (128; 33.25%). In the overall assessment of hospital services, 88.1% of patients rated them as "good," 11.4% as "fair," and only 0.5% as "poor" (Table 1). These data reflect a predominantly positive perception of the service, although a small subgroup did not consider care optimal.

Table 1

Service quality and patient loyalty levels

Level Quality	Frequency	Percentage
Good	339	88.10%
Fair	44	11.40%
Poor	2	0.50%
Total	385	100.00%
Level Loyalty	Frequency	Percentage
High	342	88.80%
Medium	38	9.90%
Low	5	1.30%
Total	385	100.00%

Note: Authors' own elaboration based on study data

"Perceived quality and loyalty in chronic patients, Hospital Lima Este Vitarte, 2024."

Dimension-wise analysis of service quality (Table 2) revealed that tangible elements (infrastructure, equipment, cleanliness) received the highest ratings (88.8% positive responses). These were followed by responsiveness (87.8%), assurance/safety (87.0%), empathy (86.2%), and reliability (86.0%). However, between 10% and 13% rated certain dimensions as "fair" and approximately 1% as "poor," particularly regarding personalized attention and trust-building, suggesting opportunities for improvement in the patient–healthcare professional relationship.

Table 2

Dimensions of service quality

Dimensions	Good (%)	Fair (%)	Poor (%)
Tangibles	88.80%	10.60%	0.50%
Reliability	86.00%	13.50%	0.50%
Responsiveness	87.80%	11.20%	1.00%
Assurance	87%	11.90%	1.00%

Empathy	86.20%	12.70%	1.00%

Note: Authors' own elaboration based on study data
"Perceived quality and loyalty in chronic patients, Hospital Lima Este–Vitarte, 2024."

Regarding loyalty (Table 1), 88.8% of patients exhibited a high level, reflecting a clear preference for continuing their care at the hospital. A further 9.9% showed medium loyalty and 1.3% low loyalty, underscoring the need to maintain high quality standards, particularly for chronic users requiring ongoing follow-up.

Dimension-wise analysis of loyalty (Table 3) confirmed this trend:

- For **objective appraisal** (fulfillment, timeliness, organization), **89.4%** reached high levels.
- For **subjective appraisal** (emotional experience, empathy, personal valuation), **88.8%** also attained high levels.

Nonetheless, approximately 10% showed medium or low levels, especially in the emotional dimension, indicating a need to strengthen communication, accompaniment, and humane treatment in everyday clinical practice.

Table 3
Dimensions of patient loyalty

Dimensions	High (%)	Medium (%)	Low (%)
Patient's Objective Appraisal	89.40%	9.60%	1.00%
Patient's Subjective Appraisal	88.80%	9.40%	1.80%

Note: Authors' own elaboration based on study data
"Perceived quality and loyalty in chronic patients, Hospital Lima Este–Vitarte, 2024."

Correlational results

Inferential analysis revealed a **strong, positive, and statistically significant correlation** between perceived service quality and patient loyalty (**ρ = 0.629; p < 0.001**) (Table 4). This finding indicates that as quality perception increases, so does commitment and loyalty toward the institution.

This result holds particular relevance for continuous quality improvement strategies, as it demonstrates that both technical service components and human treatment, along with the overall perception of the care environment, directly influence chronic patients' decisions to continue care at the same facility.

Table 4
Spearman correlation between service quality and loyalty

Variable	Correlation Coefficient (ρ)	Significance (two-tailed)	N
Hospital Service Quality	1	.	385
Patient Loyalty	0.629	0	385

Note: Authors' own elaboration based on study data
"Perceived quality and loyalty in chronic patients, Hospital Lima Este–Vitarte, 2024."

Discussion

The results of this study demonstrate a positive, strong, and statistically significant association between perceived hospital service quality and loyalty among chronic disease patients (ρ = 0.629; p < 0.001). This finding aligns with previous research indicating that satisfactory care strengthens the patient–institution bond, fostering sustained relationships over time (Rostami et al., 2018; Asriani, 2023). Similarly, Goetz et al. (2019) reported in Swiss primary care settings that patients' willingness to recommend their physician was closely associated with

interpersonal relationship quality and communication effectiveness. In their study, active listening (94.2%) and genuine interest in the patient's personal situation (93.0%) were the most highly valued aspects, whereas low accessibility (30%) and prolonged waiting times (50.6%) generated the greatest dissatisfaction. These findings support the notion that loyalty depends heavily on the quality of the human connection established during care.

In the present research, the majority of participants expressed favorable perceptions of the care received, both in terms of service quality (88.1%) and intention to continue attending the same facility (88.8%). Among the most highly rated dimensions were empathy, assurance/safety, and responsiveness, all related to humane treatment, confidence in staff competence, and readiness to address user needs. These dimensions coincide with elements identified in the international literature as pillars of a strong relationship between healthcare personnel and patients (Shie et al., 2022; Benites-Bernabé et al., 2021; Rodrigues, 2021; Valentine et al., 2008).

Along these same lines, a recent systematic review on empathy in South American healthcare services, including ten studies and 2,487 participants, revealed moderate levels of empathy among both professionals and users (Moya-Salazar et al., 2023). This finding is consistent with the present study's results, showing that interpersonal relationship quality directly influences satisfaction and loyalty. Empathy thus emerges as a central component of the patient experience and as a strategic pathway for improving care quality.

The results also align with those of Asriani (2023), who demonstrated in Indonesia that all service quality dimensions contribute significantly to strengthening patients' intention to return to the facility and recommend it. Likewise, Rostami et al. (2018) showed that satisfaction with received care is directly related to loyalty toward services, indicating that positive care experience perceptions impact both care continuity and the consolidation of emotional and rational bonds with the institution. In the Peruvian context, Benites-Bernabé et al. (2021) also found that factors such as empathy and perceived safety are determinants of user experience, reinforcing the need to strengthen healthcare personnel training in interpersonal skills, in line with Ministry of Health guidelines (Del Carmen Sara, 2019).

Although satisfaction and loyalty levels were predominantly high, a subgroup of patients expressed less favorable perceptions. These results may be linked to limitations in personalized attention, service delays, or communication deficiencies, aspects also described in previous studies conducted in public hospitals (Príncipe Ayala & Santiago Ortega, 2017). In this regard, loyalty should not be understood solely as momentary satisfaction but rather as sustained emotional and behavioral commitment, in line with recent research highlighting the relevance of attitudinal and practical loyalty in the patient–institution relationship (Karume et al., 2025; Woratschek et al., 2020).

Evidence from other service sectors follows similar patterns. In the insurance domain, Rejikumar et al. (2021) demonstrated that service quality directly influences customer trust and loyalty, reinforcing the idea that clear, close, and respectful care fosters service retention and recommendation. This coincides with our findings and underscores the importance of healthcare institutions developing continuous improvement strategies that integrate technical efficiency with warmth in treatment, active listening, and respect for the individual. In the same vein, Hsu (2018) found that the quality of direct interaction between healthcare staff and patients has a decisive effect on perceived service value and satisfaction, which in turn strengthens loyalty and word-of-mouth recommendation. This finding highlights the need to attend to every point of contact with the user, given that individual experiences may determine their continuity within the health system.

Complementarily, various studies have indicated that care combining technical quality with trust-based relationships increases both satisfaction and loyalty (Anabila et al., 2020; Yu et al., 2020). It is therefore insufficient to offer an operationally efficient service; building close, empathetic human connections that sustain a lasting relationship with the user is equally fundamental. Other work has shown that close, empathetic treatment generates positive emotions, such as gratitude, that strengthen the physician–patient relationship and foster loyalty (Huang et al., 2019). Likewise, implementing design tools aimed at aligning patient expectations with service quality contributes to optimizing the care experience (Işin & Pakdil, 2016). Both approaches concur that actively listening to patients and responding appropriately to their needs significantly improves their experience and loyalty (Huang et al., 2019; Işin & Pakdil, 2016).

In the case of chronic diseases, it has been observed that when patients not only receive care but also actively participate in their self-management and learn from others' experiences, they develop greater confidence, personal valuation, and a stronger connection with the health system (Achury-Saldaña et al., 2020; Anam, 2023). Programs such as the expert patient model show that sharing experiences strengthens therapeutic adherence and consolidates a more human relationship with healthcare teams. Thus, when individuals perceive quality care and appropriate treatment, they not only return but also tend to recommend the service (Anam, 2023). In this perspective, loyalty does not depend exclusively on clinical components but also on how patients integrally experience their care journey.

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Active participation in self-care and group settings has been associated with higher levels of safety, self-esteem, and sense of belonging (Cardoso Barbosa et al., 2021). Programs that place the patient at the center of the care process facilitate shared decision-making, improve clinical outcomes, and elevate satisfaction with care (Shortell et al., 2017; Tang et al., 2025). Frequent interaction among patients in group settings or digital platforms also fosters a sense of belonging and mutual recognition, strengthening confidence in their ability to cope with illness and generating benefits in both physical health and emotional well-being (Cameron et al., 2018). Active collaboration with healthcare staff and participation in therapeutic decisions reinforce perceptions of respectful, personalized care (Barenfeld et al., 2020; Davidson et al., 2022).

Furthermore, sociodemographic and clinical factors may modulate the empathy experience among chronic disease patients. Differences associated with educational level, ethnic background, or socioeconomic status have been described, suggesting the presence of potential structural biases in clinical interaction with implications for equity and care quality (Barenfeld et al., 2020). Variations by disease type and gender have also been documented: for example, women with chronic pain tend to report higher empathy levels than men, while persistent musculoskeletal pain and certain psychiatric disorders have been linked to diminished cognitive and emotional empathy (Lim et al., 2018; Ma et al., 2020; Zhang et al., 2021). These findings indicate that empathy is not a unidirectional attribute of healthcare providers but rather a relational, bidirectional phenomenon influenced by multiple contextual factors. Recognizing these interactions enables progress toward more sensitive, equitable, and person-centered care.

Conclusions

The results confirm that better perceptions of healthcare service quality are associated with higher loyalty levels among chronic disease patients. When care is perceived as empathetic, reliable, and timely, patients demonstrate a greater willingness to continue their care at the same facility. In this study, the dimensions of empathy, assurance/safety, and responsiveness received the highest ratings, highlighting that the human component of care constitutes a central axis of the patient–institution relationship. Accordingly, systematic strengthening of staff training in interpersonal skills and clinical communication is recommended, along with implementation of patient experience improvement programs focused on these dimensions and periodic monitoring of perceived quality using validated instruments to guide service management decisions.

Furthermore, it is confirmed that loyalty extends beyond momentary satisfaction, consolidating from the user's overall experience, particularly among patients requiring ongoing care. Improving service quality not only increases satisfaction but also strengthens trust, care continuity, and retention within the health system. In this context, comprehensive interventions targeting individuals with chronic conditions are recommended, including self-care programs, participation in decision-making, and peer support strategies, alongside systematic measurement of loyalty as an institutional performance indicator. Multicenter and longitudinal studies are also suggested to identify determinants of patient loyalty and consolidate continuity of clinical follow-up in public facilities.

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Authorship contribution
All authors declare that they meet the authorship criteria recommended by the ICMJE.

Roles according to CRediT

- **JRMV:** conceptualization, methodology, original draft writing.
- **CRZC:** writing, proofreading, and editing.
- **BACLL:** methodology, original draft writing, formal analysis.
- **GEPB:** writing, proofreading, and editing of the manuscript.

Conflicts of interest
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