

ASSESSING HOSPITAL SERVICE QUALITY: A SYSTEMATIC REVIEW USING PRISMA AND SERVQUAL TO EXPLORE PATIENT SATISFACTION AND LOYALTY

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ABSTRACT

PURPOSE:

This paper aims to develop a conceptual framework that focuses on the original dimensions of Service Quality (SERVQUAL). Patient satisfaction has been taken as a mediating variable to measure customer loyalty in the context of hospital service quality. It is important to note that SERVQUAL measures service quality rather than satisfaction, but SERVQUAL is a satisfaction measure and loyalty is considered an outcome rather than an experience or perception. This framework illustrates the interplay between hospital service quality, patient satisfaction, and loyalty as perceived by patients.

METHODOLOGY:

This study employed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) framework to conduct a systematic literature review (SLR) on hospital service quality (SQ) encompassing its dimensions, patient satisfaction, and loyalty. Deeper analysis was conducted using content analysis methods. SERVQUAL's primary sources, including Google Scholar, Scopus, Web of Science (WoS), among others, were utilized to identify relevant documents.

FINDINGS:

The Reliability, Assurance, Tangibility, Empathy and Responsiveness (RATER) dimensions have been identified in this study as the main criteria patients use to evaluate the standard of care received in hospitals. It suggests that patient satisfaction, loyalty, and service quality are positively correlated.

PRACTICAL IMPLICATIONS:

Hospital marketing managers will have a better understanding of how healthcare service quality dimensions impact patient satisfaction and loyalty, both directly and indirectly. They can also employ the recommended tools to gather feedback on their performance in terms of service quality metrics, enabling them to compare their performance over different periods.

ORIGINALITY:

SERVQUAL is a frequently utilized paradigm for evaluating service quality from the perspective of patients. However, its application to the intricate nature of healthcare services is limited. A few other techniques can also be applied like SERVPERF, Fuzzy Analytic Hierarchy, and Technical and Functional quality model, etc.

KEYWORDS

hospital service quality, patient satisfaction, loyalty, SERVQUAL, PRISMA, SLR, content-analysis

INTRODUCTION

The Indian economy increasingly relies on the service sector [1,2]. Healthcare providers, regulators, and payers are putting more emphasis on quality improvement initiatives to enhance service effectiveness, patient safety, patient outcomes, and resource allocation efficiency [3].

Meeting the demands, desires, and expectations of consumers remains a persistent challenge for healthcare providers and experts, as non-fulfillment may result in reduced patient satisfaction [4]. Over the years, the Indian government has significantly increased public expenditure on healthcare (Economic Survey, 2022-23; NHA Report, 2022), with healthcare emerging as one of the largest sectors in terms of revenue and employment [52]. The introduction of the Ayushman Bharat Digital program (NHA Report, 2022) by the Prime Minister in September 2021 aims to link hospitals across the country with digital health solutions, reflecting the rapid adoption of digital technologies such as telemedicine and increased emphasis on public-private partnerships in the past two decades.

Quality in healthcare services refers to the degree to which services meet required standards, are fit for purpose, and are perceived as excellent by service users [5]. Customer satisfaction and loyalty are strongly influenced by service quality, and the link between service quality and loyalty is mediated by customer satisfaction [6].

Assessing quality standards has become essential for effective resource management and operational enhancement in the healthcare industry [7]. The quality of services provided by healthcare organisations is crucial for achieving patient satisfaction, loyalty, and trust [8], as the unique services offered by hospital employees affect patients' intentions to use or refer to the facility, ultimately increasing positive behavioural intentions [9].

However, there is no widely recognized conceptualization of perceived service quality in healthcare, posing challenges in gauging healthcare service quality due to its intangible, heterogeneous, and simultaneous nature [10]. The Service Quality (SERVQUAL) model is commonly used to assess how patients perceive hospital quality [11], and Parasuraman, Zeithaml, and Berry's (1985) methodology for measuring service quality in healthcare is extensively utilized [12].

Both existing research and organizational practices in healthcare support the notion of enhancing hospital quality and patient safety through quality assessment systems [13]. Patients' satisfaction levels are significantly influenced by how well their healthcare services are perceived and delivered [14], and exceeding patients' and their relatives' expectations can foster loyalty [15].

This paper is structured to provide a systematic and theory-driven understanding of hospital service quality and its implications for patient satisfaction and loyalty. Following the introduction, the study outlines a rigorous methodology grounded in the PRISMA framework to identify, screen, and analyse relevant literature on hospital service quality using SERVQUAL dimensions. The results and discussion section synthesizes empirical and conceptual insights to explain how service quality dimensions influence patient satisfaction and loyalty, culminating in the development of a conceptual framework. The paper concludes by highlighting key theoretical contributions, managerial implications, limitations, and directions for future research. By consolidating fragmented evidence across diverse healthcare contexts, this review offers a comprehensive reference for researchers, healthcare administrators, and policymakers seeking to assess, compare, and improve hospital service quality in a structured, evidence-based manner.

METHODOLOGY

The methodology employed in conducting this literature review adopts a narrative approach and draws on studies from the medical field that utilize systematic literature reviews (SLRs) and meta-analyses [23]. Given the ongoing evolution of management research, there is a continuous process of refining research agendas and focus areas. Systematic reviews serve as valuable tools for understanding the development of research on a particular topic. The objective of this study is to gather pertinent information to delineate the dimensions of hospital service quality based on existing literature, employing the PRISMA statement, flow diagram, and checklist. This study adopts a systematic literature review (SLR) design following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines to ensure transparency, methodological rigor, and replicability. PRISMA was selected due to its structured and widely recognised framework for identifying, screening, appraising, and synthesising evidence, particularly in healthcare and interdisciplinary service quality research.

The methodology employed in the current literature review capitalizes on the comprehensive details and adaptability of the PRISMA model, particularly tailored for management studies [16]. A revised PRISMA2020 statement has been issued [17], with ongoing developments currently in progress. Despite the widespread use of the PRISMA Statement and other reporting criteria, errors in their application are common in articles [18], with many systematic reviews (SRs) still being inadequately conducted and reported [19]. The PRISMA Statement and its extensions represent a minimal set of evidence-based recommendations primarily aimed at enhancing the accurate reporting of SRs. While the PRISMA declaration is primarily tailored for guiding the reporting of systematic reviews with meta-analyses of interventions [20], its precise requirements can be readily adopted by various review types [18]. Systematic reviews have garnered considerable attention due to their multifaceted utility, contributing to their widespread adoption [21]. Certain funding organizations are increasingly advocating for the use of systematic reviews as an evidence-based justification for proposed randomized trials [21,22]. In the identification phase, 456 articles were initially retrieved from various databases (i.e., Scopus, Emerald, Elsevier, Web of Science, Wiley, Sage, Taylor & Frances, Inder Science and Google Scholar) using the specified keywords.

After review, 235 articles were excluded due to duplication or non-English language. The titles, abstracts, objectives, keywords, and quality of the remaining 125 articles were assessed, and those not aligned with the central theme were discarded. Full texts of 96 potentially relevant papers were then reviewed. At this stage, 46 papers were excluded for reasons such as insufficient depth on service perspectives, not aligned with study objective, non-empirical studies, poor methodological quality or lack of focus on the five SERVQUAL dimensions, the relationship between service quality, patient satisfaction, loyalty, or the mediating role of patient satisfaction. Ultimately, 50 papers met the inclusion criteria represent in Table 2 and were selected for final analysis.

FIGURE1: PRISMA FLOWCHART FOR THIS STUDY

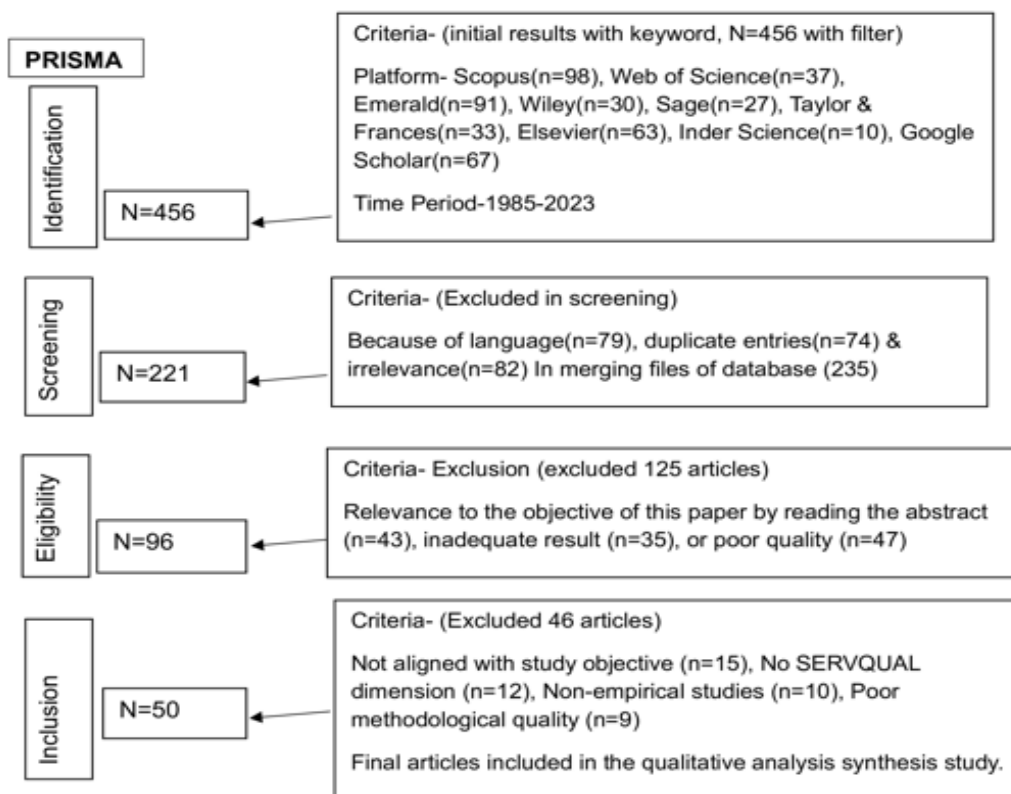


Table 1 shows the search strategy employed includes terms such as 'Service,' 'quality,' 'Healthcare,' 'Service quality in healthcare,' 'Healthcare Service quality,' 'Service quality in hospital,' 'Healthcare service quality framework,' and 'Hospital service quality framework.'

SEARCH STRATEGY AND STUDY IDENTIFICATION

A comprehensive search was conducted across major academic databases, including Scopus, Web of Science, Emerald, Elsevier, Wiley, Sage, Taylor & Francis, InderScience, and Google Scholar. The search strategy employed Boolean operators to combine keywords related to hospital service quality, SERVQUAL dimensions, patient satisfaction, loyalty, and systematic reviews. Only peer-reviewed journal articles published in English were considered to ensure academic quality and consistency. The initial search yielded 456 records, which were exported to a reference management system for further processing.

SCREENING AND ELIGIBILITY CRITERIA

Duplicate records and non-English publications were removed during the screening stage. Titles and abstracts of the remaining studies were independently reviewed to assess thematic relevance. Full-text articles were then evaluated against predefined inclusion and exclusion criteria.

Inclusion criteria:

- Peer-reviewed empirical or conceptual studies
- Explicit focus on hospital service quality
- Application of SERVQUAL or comparable service quality frameworks
- Examination of patient satisfaction and/or loyalty
- Full-text availability

Exclusion criteria:

- Non-peer-reviewed sources (e.g., editorials, conference abstracts)

- Studies not related to healthcare or hospital settings
- Articles having different language, duplicate entries and irrelevance
- Articles lacking conceptual or methodological clarity
- Studies not addressing service quality dimensions or patient outcomes

Following this process, 50 studies were retained for final synthesis.

QUALITY APPRAISAL OF INCLUDED STUDIES

To address methodological robustness and respond to PRISMA quality requirements, all included studies were subjected to a formal quality appraisal process. Consistent with prior PRISMA-based healthcare reviews [53, 54], a structured quality assessment checklist adapted from established SLR practices in healthcare and management research was employed.

Each study was evaluated across the following criteria:

1. Clarity of research objectives
2. Appropriateness of research design and methodology
3. Transparency in data collection and analysis
4. Clear operationalisation of service quality dimensions
5. Validity and reliability of measurement instruments
6. Relevance to hospital service quality, patient satisfaction, and loyalty
7. Consistency between findings and conclusions

Each criterion was scored on a three-point scale:

- 0 = Not addressed
- 1 = Partially addressed
- 2 = Fully addressed

Studies achieving moderate to high cumulative quality scores were retained for synthesis. No study was excluded solely on quality grounds; however, quality scores were used to weight interpretation during content analysis, ensuring that findings from methodologically robust studies informed the core conclusions.

DATA EXTRACTION AND ANALYTICAL APPROACH

Following quality appraisal, a structured data extraction protocol was applied. Extracted information included:

- Study objectives
- Methodological approach
- Service quality dimensions examined
- Measurement instruments used
- Key findings related to patient satisfaction and loyalty

A **content analysis technique** was employed to synthesise recurring themes, methodological patterns, and conceptual linkages across studies. SERVQUAL's five RATER dimensions served as the primary analytical framework, enabling systematic comparison and aggregation of findings across diverse healthcare contexts. The methodological patterns and empirical relationships identified through this process informed the results and discussion section, culminating in the development of a conceptual framework linking hospital service quality, patient satisfaction, and loyalty.

METHODOLOGICAL RIGOR AND TRANSPARENCY

By integrating PRISMA-based study selection, explicit quality appraisal, and structured content analysis, this methodology ensures a transparent, reproducible, and theory-driven synthesis of hospital service quality literature. This approach strengthens the credibility of the review and aligns the study with best practices adopted in high-quality healthcare systematic reviews.

ANALYTICAL APPROACH AND SYNTHESIS

Following study selection, content analysis was employed to systematically extract and categorize key themes related to service quality dimensions, patient satisfaction, and loyalty outcomes. The SERVQUAL framework served as the primary analytical lens, enabling comparative assessment of how the five RATER dimensions are operationalized and evaluated across healthcare settings. Patterns, convergences, and methodological trends identified in the literature informed the synthesis presented in the results and discussion section.

In addition to descriptive synthesis, the methodological insights derived from reviewed studies—such as measurement approaches, conceptual models, and mediating mechanisms—were critically examined to support theory development. This methodological grounding directly informed the construction of the conceptual framework, which integrates service quality, patient satisfaction, and loyalty relationships.

By combining PRISMA guided study selection with structured content analysis, this methodology ensures both methodological robustness and conceptual depth, enabling the study to generate reliable insights for assessing hospital service quality and guiding future empirical research.

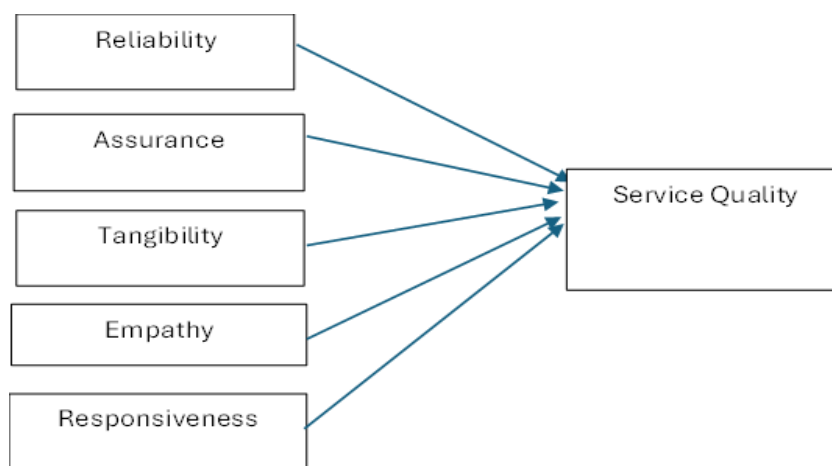
RESULT & DISCUSSION

SERVICE QUALITY AND SERVQUAL

As per various scholars [30,31], service quality is intricate, multifaceted, vague, intangible, abstract, and challenging to grasp. Nonetheless, certain renowned academics have attempted to define it; for example, some studies define service quality as a gap between consumers' expectations and perceptions [5,6,7,8,9,10,11]. A strong correlation exists between quality and services, which can be evaluated using various factors [32].

The literature on service quality (SQ) suggests a division into two distinct dimensions: technical quality and functional quality [33]. Technical quality pertains to fundamental care attributes such as infrastructure and treatments offered, while functional quality relates to secondary care attributes like the amiability of service providers and the punctuality of service delivery. Additionally, Gronroos, n.d. identified the "image" of the service provider as a third component in service evaluation [31], serving as a filter for consumers' quality perceptions. The SERVQUAL instrument developed by Parasuraman et al., 1985; Zeithaml et al., 1988 is the most cited framework in service marketing literature [5,11]. According to Parasuraman et al., 1985 as shown in figure 2, perceived service quality resembles a general assessment akin to attitude, suggesting that discrepancies or gaps between consumers' expectations and performance across quality dimensions indicate service quality [11]. The "Gaps Model" delineates five areas in the service delivery process where customer needs may remain unfulfilled, developed following enhancements to their original model.

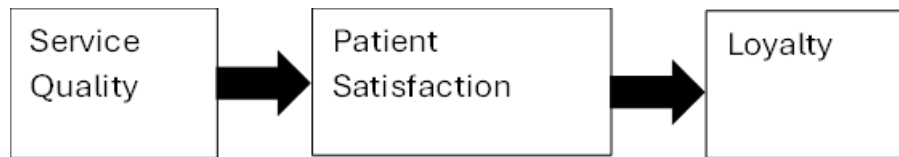
FIGURE 2: RATER CONSTRUCT AS A SERVICE QUALITY FRAMEWORK (ADAPTED FROM PARASURAMAN,1988 [11])



CONCEPTUAL FRAMEWORK

Figure 3 presents the conceptual framework illustrating the relationship between service quality, patient satisfaction, and patient loyalty. The framework proposes that service quality dimensions directly influence patient satisfaction by shaping patients' perceptions of healthcare services. In turn, satisfied patients are more likely to develop loyalty, reflected in repeat visits, positive word-of-mouth, and continued preference for the healthcare provider. Additionally, the model suggests that service quality may also have a direct effect on patient loyalty, highlighting the central mediating role of patient satisfaction in strengthening long-term patient - hospital relationships.

FIGURE 3: CONCEPTUAL FRAMEWORK FOR THIS STUDY



PATIENT SATISFACTION

Customer satisfaction has garnered significant attention in marketing and services literature [35,36]. Patient satisfaction, defined as a consumer's post-purchase mental state, reflecting their attitude toward a product or service after its use [37]. According to Parasuraman et al., 1985; Zeithaml et al., 1988, satisfaction entails comparing consumers', users', or patients' perceptions with their expectations and performance of the service providers [5,11]. It represents a cognitive assessment of patients' attitudes toward services that emotionally impact them [38,39]. As per the definition proposed by Javed et. al., "patient satisfaction is the consequence of perceived service quality and is a function of observed performance of healthcare service and patient expectations [40]."

In the literature, customer satisfaction and service quality have often been regarded as two sides of the same coin. Oliver, 1977 postulated that satisfaction is a function of the disconfirmation of performance from expectation. Customers can only evaluate an object after comprehending it, unlike satisfaction assessments; expectations of service quality are not influenced by interactions with the service environment or providers [41]. Researchers' opinions on service satisfaction and quality vary. Considering that satisfaction and service quality both represent attitudes, several researchers [42] have attempted to operationalize satisfaction similarly to service quality. However, some researchers argue that they are distinct, and some say they are wholistic [43].

PATIENT LOYALTY

Patient loyalty refers to the decision of a consumer to continue using a service or product after its initial use. Various factors such as price, quality, brand image, satisfaction, service, and reliability can influence loyalty. Service quality indirectly affects patient loyalty through satisfaction [44], as well as patient enjoyment [45]. The degree of customer satisfaction plays a significant role in determining customer loyalty. Satisfied customers are more inclined to remain loyal to a product or service [46,47,48]. Empirical evidence provided by Zeithaml et al., 1988 supports a positive correlation between service quality and loyalty [5]. Patient satisfaction was examined as a mediating factor between customer loyalty and service quality [49]. In service organizations, the pathway "service quality, customer satisfaction, loyalty" was found to be significant [50].

Healthcare service providers must deliver high-quality services to consumers [24], as it improves the patient -focussed care of the healthcare sector. Oliver (1977) [41] proposed that satisfaction depends on how performance compares with expectations. Customers can assess services only after experiencing them and always expect improvements, even when services are excellent. While satisfaction can be influenced by values and prices, service quality is not linked to costs [51]. Service quality is evaluated based on the service itself, whereas satisfaction can be shaped by factors like mood. Unlike satisfaction, perceptions of service quality remain unaffected by the service environment or interactions [41]. Researchers debate whether service quality and satisfaction are distinct or overlapping concepts. Some researchers (Sureshchandar

et al., 2002) argue that satisfaction can be measured similarly to service quality [42], while others (Cronin & Taylor, 1994) maintain they are separate constructs [43, 25]. The present study uses this dilemma as a base and extended SERVQUAL model using two mediating variables. Previous studies have consistently demonstrated that consumers' positive perceptions of service quality correlate with better outcomes for hospitals [26]. Consequently, to meet consumer expectations [27] and mitigate unfavourable treatment results [28], healthcare service providers are increasingly prioritizing service quality [29].

This study explores the relationship between Perceived Service Quality, Patient Satisfaction, and Loyalty in the healthcare industry, we propose an innovative integration. Our primary objective is to examine the connections between service quality, satisfaction with service, and loyalty intention. Our findings suggest that, despite a comprehensive examination of the literature, research on the relationship between patient satisfaction and loyalty in the healthcare industry is still at an early stage of development. We expand the scope of our study beyond conventional Perceived Service Quality and Patient Satisfaction frameworks to explore loyalty.

CONCLUSION

This study provides a comprehensive literature assessment covering various topics related to healthcare quality and associated variables, such as service quality, patient satisfaction, and loyalty. The literature review encompasses definitions of health, healthcare quality, studies on the Indian healthcare system, service quality (SQ), the inception and utilization of SERVQUAL, and the correlation between SQ and patient satisfaction, among other categories. Additionally, the literature review explores research linking SQ and patient satisfaction for healthcare organizations. Identified gaps in the literature serve as focal points for current research efforts.

To evaluate service quality from the perspectives of both patients and attendants, a conceptual study framework is proposed. Hospitals embarking on the path to overall quality management must prioritize their patients, as "quality" is defined by meeting consumer needs. Understanding patient needs constitutes the initial step for hospitals in this endeavour. Hospitals can utilize the "voice of the customer" to construct a "house of quality" from an organizational standpoint to fulfil their patient's needs, as highlighted in the literature review. Satisfied patients' word-of-mouth marketing efforts influence their family and friends to patronize specific hospital services. Many patients rely on their attendants to access healthcare services, these recommendations are crucial in shaping patients' purchasing decisions. Service quality, encompassing both experience and outcomes, can contribute to loyalty, though loyalty is influenced by multiple factors beyond quality. Satisfied patients are more likely to remain loyal and may even be willing to pay a premium for better services. A root analysis of Service Quality, Patient Satisfaction, and Loyalty Intentions can shed light on this aspect.

In today's business landscape, understanding client preferences is paramount for organizations to better address their needs. The current study aids practitioners in understanding patient preferences by quantifying service quality characteristics. Hospitals can utilize this tool to collect patient information for informed decision-making. For example, hospitals performing poorly on various dimensions can scrutinize their systems to identify reasons for patient dissatisfaction. Categorizing clients can assist hospitals in positioning themselves for the future. Furthermore, hospitals can compare their services with those of competitors by gauging how patients perceive the quality of their services. By analyzing the origins of satisfaction and discontent in both scenarios, hospitals can identify potential areas for improvement.

LIMITATIONS AND FUTURE RESEARCH DIRECTION

This conceptual paper discussion is subject to several constraints.

Firstly, an extensive literature review on hospital service quality underscores the inadequacy of the SERVQUAL and modified SERVQUAL instruments' dimensions in capturing the comprehensive perspective of perceived service quality within a healthcare setting. Thus, many researchers have opted for non-SERVQUAL or alternative methods to comprehend and measure hospital service quality, ensuring all relevant areas are addressed.

Secondly, the use of only a few readily accessible databases for document screening may have limited the scope of search results. Although some new topics emerged from content analysis, further themes could surface depending on the research's contextual nuances.

Thirdly, the proposed conceptual framework is open to quantitative testing and validation across diverse healthcare contexts, including public hospitals, private hospitals, and specialized facilities. It can be applied in various geographic contexts, such as developing or Asian countries, and adapted to demographic variables like income levels, education levels, age, and gender.

Furthermore, data collection can encompass different patient groups, including inpatients, outpatients, emergency patients, and individuals with specific diseases or illnesses, using validated items. Additionally, by incorporating various theories such as the expectancy-disconfirmation theory, the two-factor theory of emotion, and the gap model, this model can be expanded to include moderators, mediators, or other dependent variables. Moreover, it holds applicability in a wide array of service research settings, spanning education, hospitality, public transportation, public services, and even correctional facilities.

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APPENDIX

Table 1 shows search strategy employed includes terms such as 'Service,' 'quality,' 'Healthcare,' 'Service quality in healthcare,' 'Healthcare Service quality,' 'Service quality in hospital,' 'Healthcare service quality framework,' and 'Hospital service quality framework.'

TABLE 1. BOOLEAN SEARCH TECHNIQUE

Boolean operator	Measurement instrument	AND Population	AND Tool
•	Service Quality	'Hospital*' OR	'Instrument*' OR
•	Patient perspective	• Department	• Model*
•	SERVQUAL study	• Care	• Tool*
•	GAP Model	• Ward	• Program*
		• provider	• Questionnaire*
			• Survey*
			• Measure*
			• Assess*
			• Factor*
			• Compare*
			• Method*
			• Develop*

Table 2 represents the list of 50 papers that met the inclusion criteria and were finalized for the analysis. This table includes the author name, year of publication, journal name, funding is received or not by the author, aim of the study, methods for analysis, country, setting, and population.

TABLE 2. STUDY CHARACTERISTICS AND DESCRIPTION (SOURCE: AUTHORS' COMPILATION)

Study	General characteristics			Description			
Author & Year	Journal	Funding	Aim	Methods	Country/Region	Setting	Population
1. (Jabnoun and Chaker, 2003)	Managing service quality	No Funding	compares the level of service provided by private and public hospital	Questionnaire	UAE	Hospital	Inpatient in general hospital
2. (Ali et al., 2023b)	International Journal of Quality & Reliability Management	No Funding	To create a conceptual framework that includes the original SERVQUAL dimensions and incorporates additional dimensions	SLR, content analysis, bibliometric analysis	Pakistan	Hospital	Government hospital patients
3. (Darzi et al., 2023)	LBS Journal of Management & Research	No Funding	Synthesize the literature on service quality that is currently available and investigate the knowledge gaps regarding the various service quality indicators and patient satisfaction.	SLR	India	Hospital	Private hospital, public hospital, and general hospital patients
4. (Sadiq Sohail, 2003a)	Managing service quality	No Funding	Measured perceived value of service concerning patient perspective	Survey, questionnaire	Malaysia	Hospital	Private hospital patients
5. (Padma et al., 2009)	Benchmarking: An International Journal	No Funding	to establish the parameters of Indian hospitals' service quality	Literature review	India	Hospital	General hospital patients and their attendants
6. (Amin and Nasharuddin, 2013)	Clinical Governance: An International Journal	No Funding	To better understand how patient satisfaction and behavior intention are impacted by hospital service quality	Questionnaire, convenience sampling technique	Malaysia	Hospital	Private hospital, public hospital inpatient
7. (Endeshaw, 2021)	Journal of Health Research	No Funding	Review the quality-measurement methods that exist and are used in healthcare	Literature review	Developing and Western countries	Hospital	General hospital patients
8. (Van Heerden, 2010)	Journal of Health Research	No Funding	Measure customer expectations and perceptions as well as the gaps between these two variables to	Questionnaire, Survey	South Africa	Hospital	Private hospital patients

			identify the realistically important areas where management should concentrate their efforts to improve the quality of the service system.				
9. (De Jager, Du Plooy and Femi Ayadi, 2010)	African Journal of Business Management	No Funding	To understand the responsiveness determinant of SQ which will lead to satisfaction and improvement in healthcare quality in developing countries.	The survey, questionnaire, Likert scale	South Africa	Hospital	Public hospital in-patient and out-patient
10. (D'cunha and Suresh, 2015)	International Journal of Health Science and Research	No Funding	To measure the satisfaction level of the patients with the help of various dimensions of service quality	Structured questionnaire	India	Hospital	Teaching hospital medical ward patients
11. (Nwobodo-Anyadiegwu, Ibrahimu and Mbohwa, 2018)	Journal of Industrial and Intelligent Information	No Funding	To study the overall service quality and explore the concern of patient satisfaction at the clinic	Survey, quantitative and qualitative both approach	South Africa	Clinic	University clinic patients
12. (Essiam, 2023)	European Journal of Business and Management	No Funding	to assess patient satisfaction with healthcare service and quality measures	Survey, convenience sampling technique	Ghana	Hospital	Public university hospital's out-patient
13. (Yeilada and Direktör, 2010)	African Journal of Business Management	No Funding	Three objectives are tested in this paper: the SERVQUAL instrument's dimensionality in the Northern Cyprus healthcare sector; the service quality offered in Northern Cyprus's public and private hospitals; and the service quality dimensions that are significant for patient satisfaction.	Questionnaire, systematic sampling	Northern Cyprus	Hospital	Private and Public hospital patients
14. (Al-Neyadi, Abdallah and Malik, 2018b)	International Journal of Healthcare Management	No Funding	This study examines the factors influencing patient satisfaction in private and public hospitals in the UAE using SERVQUAL's five service quality dimensions as a basis for evaluating the quality of healthcare services.	Modified questionnaire, quantitative approach	UAE	Hospital, Nursing, Physician care	Private and Public hospital patients

15. (THE APPLICABILITY OF SERVQUAL IN DIFFERENT HEALTH CARE ENVIRONMENTS INTRODUCTION, n.d.,1997)	Journal of Services Marketing	No Funding	study that examines the usability of a modified SERVQUAL instrument as a means of assessing service quality	Modified and reduced questionnaire, random sampling	Australia	Medical care, Healthcare	Medical centres health providers
16. SM Mthanti (2015)	North-West University	No Funding	To explore the existing literature on perceived service quality, customer satisfaction influences consumption behaviors and patterns.	Literature review, empirical study	South Africa	Healthcare	General hospital patients
17. (Irfan and Farooq, 2012)	Middle-East Journal of Scientific Research	No Funding	to investigate the level of patient care provided by public hospitals	Modified SERVQUAL questionnaire	Pakistan	Hospital	Public hospital patients
18. (Int <i>et al.</i> , 2015)	Int. J. Behavioural and Healthcare Research	No Funding	To conduct an in-depth and methodical literature search on healthcare quality, SQ, the creation and use of SERVQUAL, and the relationship between SQ and patient satisfaction	SLR, literature review	India	Healthcare, Hospital, Medical care, Nursing	General hospital patients
19. (Chalikias <i>et al.</i> , 2016)	Int. J. Electronic Marketing and Retailing	No Funding	to evaluate and quantify client loyalty and satisfaction for a service termed "Nursing at home"	Questionnaire	Greece	Nursing	Hellenic Red Cross Nursing at home patients
20. (Sadiq and Adil, 2021)	<u>International Journal of Productivity and Quality Management</u>	No Funding	Examining consumer perceptions of service quality and how they relate to the satisfaction and retention of customers in Malaysia and India, are two very distinct cultural, historical, and traditional contexts.	Structured questionnaire	India & Malaysia	Banks	General bank customers and administrative staff
21. (Jonkisz, Karniej and Krasowska, 2021)	<u>International Journal of Environmental Research and Public Health</u>	No Funding	to investigate how the SQ technique is used to identify the factors affecting how patients evaluate the quality of services	Literature review, a bibliographic query, and desktop data analysis	Saudi Arabia	Hospital, Medical specialist, internal medicine, clinic	General hospital inpatients
22. (Rezaei <i>et al.</i> , 2018)	Medical Journal of the Islamic Republic of Iran	No Funding	Aare To examine service quality in Iranian hospitals by conducting a thorough literature review and meta-analysis.	Literature review, meta-analysis	Iran	Hospital	General hospital inpatients

23. (Shafiq <i>et al.</i> , 2017)	The Journal of Health Care Organization, Provision, and Financing	Higher Education Commission, Pakistan and University of the Punjab, Lahore	In this work, a service quality measurement scale was created by adapting the SERVQUAL instrument concerning the patient's perspective.	Questionnaire, simple random sampling technique	Asian countries	Hospital	Asian countries' hospital inpatient and outpatient
24. (Agarwal <i>et al.</i> , 2022)	International Journal of Marketing and Business Communication	No Funding	to conduct an in-depth review of the literature on the numerous facets of healthcare service quality, patient satisfaction, and loyalty	SLR, secondary data, citation analysis, logical reasoning	Indonesia, Saudi Arabia, Turkey	Healthcare, hospital	General hospital patients
25. (Ali <i>et al.</i> , 2021)	Journal of Contemporary Issues in Business and Government	No Funding	to research the trends and patterns found in the literature on healthcare service quality	SLR, Bibliometric analysis	US	Healthcare, Hospital	General hospital patients
26. (Upadhyai <i>et al.</i> , 2019)	Journal of Health Management	No Funding	To comprehend what constitutes healthcare service quality, the underlying characteristics of healthcare service quality, and how it is measured, it is necessary to investigate and synthesize the body of published knowledge currently available.	Literature review	India	Healthcare, Hospital, Medical, and non-medical services	General hospital patients
27. (Li <i>et al.</i> , 2015)	Asian Pacific Journal of Tropical Biomedicine	No Funding	To ascertain how patients in hospitals in nine Chinese cities feel about the level of service and to suggest some ways to make it better	Survey, SERVQUAL scale, qualitative approach	China	Hospital	Nine City Hospital patients
28. (KhanMohammadi, Talaie and Azizi, 2023)	Healthcare Analytics	No Funding	to evaluate the effectiveness of hospital services using the fuzzy Best-Worst Method (BWM), an effective, trustworthy, and simple-to-use quality evaluation technique.	Case study, SERVQUAL scale	Iran	Hospital	General hospital inpatients
29. (Ali <i>et al.</i> , 2022)	<u>The TQM Journal</u>	No Funding	to review the literature on healthcare service quality to identify and analyze the models	Literature review	Malaysia	Hospital	General hospital inpatients

			and dimensions of healthcare service quality and to present ideas for future study				
30. (Liu <i>et al.</i> , 2023)	BMC Health Services Research	No Funding	to develop and evaluate a research model to quantify patients' worth across all outpatient encounters	Literature review, expert panel discussion	China	Hospital	Public hospital inpatient and outpatient
31. (Zarirah Nizam, 2023)	International Journal of Membrane Science and Technology	No Funding	to forecast the link between service quality, recommendation, and private university choice	Questionnaire by using Google form	Indonesia	Universities	Private university students
32. (Rios-Caro <i>et al.</i> , 2023)	HUMAN Review	No Funding	The quality of the teledentistry service and the degree to which patients who received this type of care were satisfied were being studied during COVID-19.	Survey, Questionnaire, descriptive correlational and cross-sectional design, SERVQUAL model	Peruvian central jungle	Teledentistry service, Home care services	customers
33. (Farrokhi <i>et al.</i> , 2023)	BMC Health Services Research	No Funding	To aggregate the findings of similar studies to spot trends and discrepancies in Iran's outpatient care quality.	SLR, Meta-analysis	Iran	Hospital	General hospital outpatients and inpatients
34. (Amjeriya & Kumar Malviya, 2019)	International Journal of Engineering Research & Technology	No Funding	to identify the key service quality factors that influence patient satisfaction in the healthcare industry	Survey, Questionnaire, statistical method	Ujjain in India	Hospital	General hospital patients
35. (Nair <i>et al.</i> , 2023)	BMC Health Services Research	No Funding	explains how the Manyata-supported facilities' quality changed in comparison to the NABH standards of care	NABH checklist, SLR, Thematic analysis	India (Maharashtra, Uttar Pradesh, Jharkhand)	Hospital	Review of hospital policies and protocols
36. (Kandu, Jain and Ghosal, 2023)	INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY	No Funding	to aggregate current data, identify knowledge gaps, and provide wise counsel to academics, decision-makers, and healthcare professionals to evaluate the service quality of hospitals in Nepal	SLR, Meta-analysis, Random Effect- model	Nepal	Hospital	Public hospital patients

			by systematic evaluation of the literature and meta-analysis				
37. (Joseph, 2019)	International Journal of Scientific Research and Engineering Development	No Funding	In the current work, which analyses the quality of healthcare connected to Indian studies and evaluates the definition of service quality and the creation of SERVQUAL, a thorough examination of the literature has been conducted.	SLR	India	Hospital	General hospitals
38. (Jones <i>et al.</i> , 2008)	J Clin Psychol Med Settings	No Funding	Investigated how young adults' healthcare behavior correlated with indicators of childhood healthcare exposure, healthcare attitudes, and optimism.	Survey	US	University	College students
39. (Chang and Chang, 2013)	Journal of Dental Sciences	No Funding	to suggest a conceptual framework for determining the primary motivators and offering suggestions for improving dental care service quality	Kano-model-based questionnaire, Donabedian's structure-process-outcome mode	Taiwan	Hospital	Studied hospital patients
40. (Senić and Marinković, 2013)	International Journal of Consumer Studies	No Funding	Students' satisfaction with the standard of care offered by student polyclinics was also examined in the study	Survey	Serbia	University	State-run university students
41. (Ampaw <i>et al.</i> , 2020)	Kybernetes	No Funding	to present actual data on patient satisfaction, which is a predecessor to the quality of healthcare services, and ongoing service use	Questionnaire	Ghana	Hospital	Selected hospitals patient
42. (Chang, Chen and Lan, 2013)	BMC Health Services Research	No Funding	This study tried to fill the research gap on the relationship between service quality, patient trust, and satisfaction from the possibility of interpersonal-based medical service encounters	Questionnaire survey	Taiwan	Medical centres	Seven medical centers' outpatient
43. (Sembiring & Nurwahyuni, 2023)	JOURNAL OF INDONESIAN HEALTH POLICY	No Funding	To identify the factors that influence executive patient loyalty at the COVID-19 pandemic era Siloam	Questionnaire, observational research design	Indonesia	Private hospital	Siloam Hospitals TB Simatupang outpatient

	AND ADMINISTRATION		Hospitals TB Simatupang outpatient installation.				
44. (Wu, 2011a)	Siloam Hospitals TB Simatupang outpatient	No Funding	to investigate the connections between hospital brand image, service excellence, patient loyalty, and satisfaction	Survey	Taiwan	Hospital	Large private hospital patient
45. (Hemadeh <i>et al.</i> , 2019)	International Journal Health Planning Management	World Bank	intended to evaluate patients' happiness with certain healthcare services offered by PHCCs and to discover the elements that influence patients' overall satisfaction	Survey through phone calls	Lebanon	Primary Healthcare Centres (PHCs)	Patients of selected Primary healthcare centers
46. (Vimla and Taneja, 2021)	Health Services Management Research	No Funding	to comprehensively examine and synthesize existing data, as well as to suggest a conceptual model of hospital brand image and its effect on patient loyalty via PSQ and PS	SLR, Meta-analysis	India	Hospital	General hospitals patient
47. (Vogus and McClelland, 2016)	Human Resource Management Review	No Funding	To meet the service problems of complexity, intangibility, and co-production, as well as the distinctive temporal dynamics of care delivery and its measurement through time, we examine sets of practices and processes used in healthcare. A more thorough integration of processes from management research on customer satisfaction and service quality into health services research can be advantageous. Current developments in healthcare can serve as natural experiments for the development of new insights.	Literature review	US	Healthcare	Patients of the healthcare centers
48. (M. Shashank., n.d.,2023)	Journal for Re-Attach Therapy and Developmental Diversities	No Funding	Can hospital image and service quality affect patients' satisfaction and loyalty	Questionnaire	India	Hospital	HSNJKT patients

49. (Prasad & Verma, 2022)	Int. J. Management Practice	No Funding	Provides future researchers with a thorough analysis of the service quality models that are available in the existing literature and an integrated perspective on service quality.	PRISMA review framework, Thematic analysis, and content analysis	India	Hospital	Different models can be applied in measuring the hospital service quality
50. (Pauli, Martin and Greiling, 2023)	International Review on Public and Nonprofit Marketing	University of Applied Sciences Upper Austria	Review of the available literature on WOM in healthcare	SLR	Austria	Hospital, Healthcare	General hospitals patient

Source: Author Framed