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\*Corresponding author: Michael Mncedisi Willie, Council for Medical Schemes, Policy Research and Monitoring, Pretoria, South Africa.

E-mail: [m.willie@medicalschemes.co.za](mailto:m.willie@medicalschemes.co.za)

## MARKETING | RESEARCH ARTICLE

# Challenges and Considerations in Assessing Healthcare Service Quality: A Comprehensive Analysis

Michael Mncedisi Willie\*

\*Council for Medical Schemes, Policy Research and Monitoring, Pretoria, South Africa.

Email: [m.willie@medicalschemes.co.za](mailto:m.willie@medicalschemes.co.za)

**Abstract:** Service quality is vital in determining customer satisfaction and loyalty across industries. This paper comprehensively reviews service quality as a mediator variable, synthesising existing literature on its theoretical underpinnings, empirical evidence, and practical implications. Traditional service quality dimensions like reliability and responsiveness are discussed alongside emerging dimensions like accessibility and communication. The application of the SERVQUAL model across different industries is examined, highlighting its utility and addressing limitations, particularly in healthcare. Challenges related to standardisation, intangible aspects of care, limited scope, dynamic care delivery, biases in patient responses, lack of generalizability, and contextual factors in telemedicine are discussed. Tailored approaches considering industry-specific dynamics and customer needs are recommended to enhance service quality assessment and management.

**Keywords:** Service Quality, Customer Satisfaction, Loyalty, SERVQUAL Model, Healthcare, Challenges, Standardisation, Telemedicine.

**JEL Code:** I1, I11, I18, M31, L84

## 1. INTRODUCTION

Service quality is essential for organisations across industries as it directly impacts customer satisfaction and loyalty. It encompasses various dimensions that reflect customers' perceptions of the excellence or superiority of services provided (Zeithaml et al., 1985). These dimensions, including reliability, responsiveness, assurance, empathy, and tangibles, are benchmarks for assessing the quality service delivery. Traditionally, the focus has been on these dimensions, which are fundamental in ensuring positive customer experiences and fostering long-term relationships between customers and service providers. In recent years, service quality has evolved to encompass additional dimensions equally crucial to meeting customer expectations. For example, accessibility and communication have developed the overall service experience (Parasuraman et al., 1988). Access to services, including convenient location and flexible operating hours, is significant in customer satisfaction. Effective communication between service providers and customers is also essential for ensuring clarity, transparency, and mutual understanding, ultimately enhancing service quality. Despite the importance of service quality across industries, assessing and managing it effectively, particularly in the healthcare sector, presents numerous challenges. Healthcare services are characterised by significant variability and a lack of standardisation across different providers and settings. This variability poses challenges for generalising findings from service quality assessments, as the quality of care can vary widely between facilities (Hamid, Azim, Rahman et al., 2023). Moreover, many aspects of healthcare, such as empathy, communication, and the overall patient experience, are intangible and difficult to measure objectively, potentially leading to gaps in assessing service quality (Javed & Ilyas, 2018).

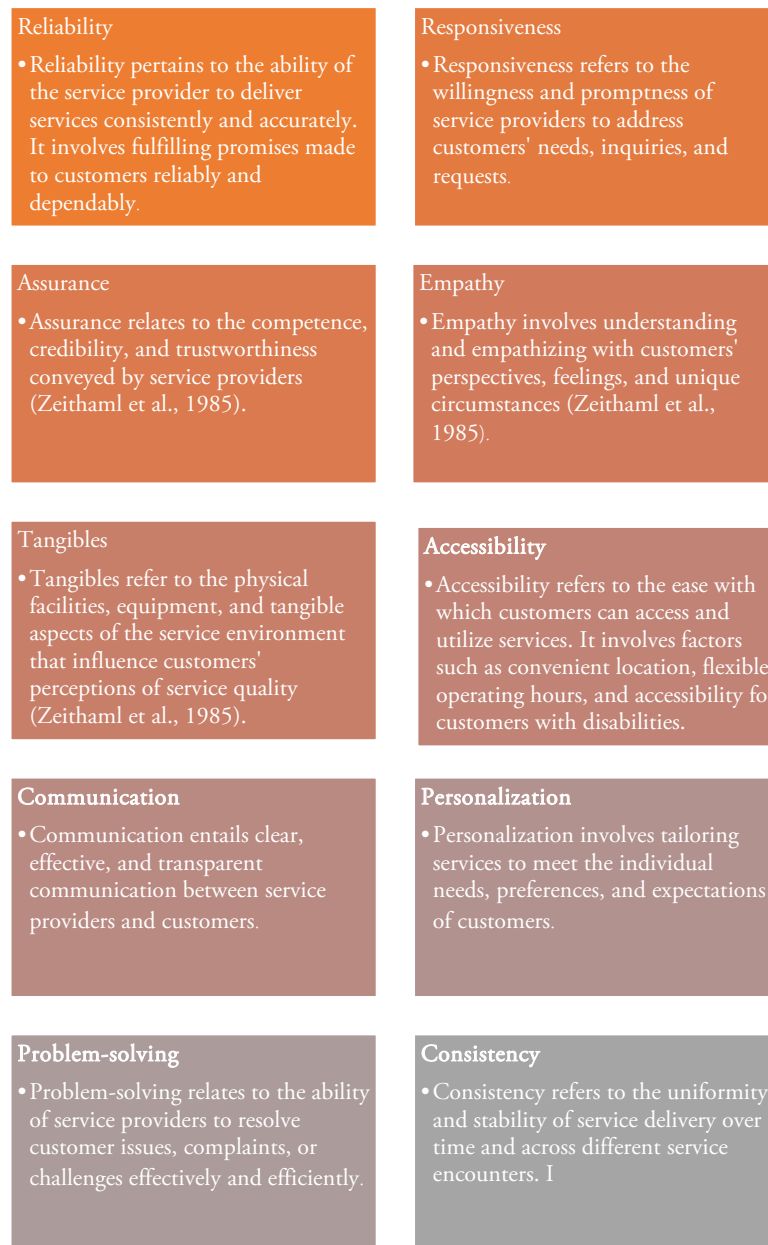


The objectives of this study are to explore the application of the SERVQUAL model in various industries and to identify the limitations encountered in its implementation. To accomplish these aims, a thorough examination of relevant literature was done, with a specific emphasis on studies that used the SERVQUAL model to evaluate service quality in various sectors. The search included academic databases, scholarly journals, and other publications from the field of service management. The studies were chosen based on their pertinence to the study goals and their contribution to comprehending the implementation and constraints of the SERVQUAL model in various industrial settings.

## 2. TRADITIONAL AND EVOLVING DIMENSIONS OF SERVICE QUALITY

As Zeithaml et al. (1985) outline, the traditional dimensions of service quality represent foundational aspects of service excellence that have long been recognised as essential components in various industries. These dimensions encompass reliability, assurance, tangibles, empathy, and responsiveness, each emphasising different facets of the service experience. As service industries evolve and customer expectations shift, additional dimensions have emerged to address the changing landscape of service provision (Parasuraman et al., 1988). Accessibility has garnered greater significance in assessing service quality, emphasising the ease customers can access and utilise services (Parasuraman, Zeithaml, & Berry, 1985). In today's competitive landscape, characterised by rapid technological advancements and evolving customer expectations, the availability of services has a crucial influence in influencing client perceptions and experiences (Meuter, Ostrom, Roundtree et al., 2000). Customers now expect seamless access to services across various channels and touchpoints, including online platforms, mobile applications, and physical locations (Lemon & Verhoef, 2016). Businesses that prioritise accessibility by offering convenient access options, intuitive interfaces, and streamlined processes are better positioned to meet the needs of their clientele and enhance overall satisfaction.

Moreover, accessible services contribute to customer loyalty and positive word-of-mouth recommendations, underscoring the importance of accessibility as a fundamental dimension of service quality in contemporary service environments. Factors such as convenient location, flexible operating hours, and accommodations for customers with disabilities contribute to enhancing accessibility and customer satisfaction. Effective communication between service providers and customers ensures clarity, transparency, and mutual understanding (Zeithaml et al., 1990). Clear, concise, and transparent communication enhances service quality by facilitating information exchange and managing customer expectations. Personalization has emerged as a prominent dimension of service quality (Parasuraman, Zeithaml, & Berry, 1988). In today's competitive marketplace, where customer expectations continue to evolve, the ability of service providers to tailor their offerings to individual preferences has become increasingly crucial (Pine, 1993). Customers now expect personalised experiences that resonate with their unique needs and preferences (Bustard, 2019). Consequently, businesses leverage technology and data analytics to deliver customised services and products that cater to their clientele's specific desires and expectations (Rust & Huang, 2014). This focus on personalisation enhances customer satisfaction and fosters long-term loyalty and advocacy (Verhoef, Reinartz, Krafft et al., 2010). Thus, personalisation has become an integral aspect of service quality in contemporary business environments. It involves tailoring services to meet individual customers' unique needs, preferences, and expectations (Pine, 1993). Practical problem-solving is another critical dimension of service quality, enabling service providers to address customer issues, complaints, or challenges promptly and efficiently (Vu, 2021). Service providers can cultivate client trust and loyalty by spotting issues, providing suitable remedies, and assuring customer happiness. Finally, consistency in service delivery is vital for maintaining customer trust, reliability, and confidence (Harriet, Arthur, Komunda & Mugizi, 2024). Consistent service standards, processes, and outcomes across different service encounters contribute to building positive perceptions and long-term relationships with customers.



Source: Zeithaml et al. (1985); Parasuraman et al. (1988); Zeithaml et al. (1990); Pine (1993); Javed & Ily (2018); Vu (2021); Harriet, Arthur, Komunda & Mugizi (2024).

**Figure 1. Dimensions of Service Quality**

### 3. APPLICATION OF SERVICE QUALITY MODEL IN VARIOUS INDUSTRIES

The dimensions outlined above collectively shape customers' perceptions of service quality and play a crucial role in influencing their satisfaction, loyalty, and overall experiences with the service provider (Harriet, Arthur, Komunda & Mugizi, 2024). Effective management of these dimensions is essential for delivering superior service experiences and maintaining a competitive edge in the marketplace (Sachdev & Verma, 2004). Theoretical Foundations of Service Quality Several theoretical frameworks have been proposed to elucidate the determinants and consequences of service quality. The SERVQUAL model, developed by Parasuraman et al. (1988), posits that service quality is determined by the gap between customers' expectations and perceptions across key dimensions. Several limitations emerge when employing the SERVQUAL Model across various industries, as

outlined in Table 1 below. Firstly, studies often contend with limited sample sizes, potentially constraining their ability to fully encapsulate the diverse services within sectors like banking (Raza, Umer, Qureshi, et al., 2020). Furthermore, healthcare services lack standardisation, posing challenges in generalising findings across different healthcare settings (Hamid, Azim, Rahman et al., 2023). Similarly, the vastness of the retail sector presents a hurdle, as studies focusing on specific retail subsectors may fail to capture the intricacies of each industry niche (Cronin & Taylor, 1992). Moreover, studies confined to particular airlines or regions may struggle to offer insights applicable to the broader airline industry (Bozorgi, 2007; Chen, Du, Zhang, et al., 2022; Li, Wu, Han & Li, 2022). Similarly, investigations centred solely on hospitality industry segments, such as hotels, may not encompass the full spectrum of hospitality services (Saleh, Ryan & Ryan, 1991; Wong, Dean & White, 1999). In academic discourse, it is essential to consider the potential limitations of established frameworks like the SERVQUAL Model. For instance, research indicates that this model may not adequately address specific aspects of service quality, as demonstrated by studies such as Chingang & Lukong (2010). The author's investigation supports this notion, revealing that the SERVQUAL Model may not be suitable for evaluating service quality in grocery stores. Specifically, dimensions such as tangibles, responsiveness, and product quality exhibited unreliability in measurement within this context (Chingang & Lukong, 2010). The authors recommended exploring alternative methods and models to assess grocery retail service quality and customer satisfaction. Due to various factors, the SERVQUAL Model may not always be suitable for evaluating service quality in specific sectors or instances. One such sector is the healthcare industry, where the complexity and uniqueness of healthcare services pose challenges for applying generic service quality models like SERVQUAL (Parasuraman, Zeithaml, & Berry, 1985). Additionally, the highly personalised nature of healthcare interactions and the influence of patient expectations on perceived service quality further complicate the applicability of SERVQUAL in this context (Cronin & Taylor, 1992). Similarly, in the hospitality industry, where the emphasis is on creating memorable experiences for guests, the SERVQUAL Model may fall short of capturing the holistic nature of service quality. Hospitality services encompass diverse elements such as ambience, atmosphere, and emotional engagement, which may not be adequately addressed by the standardised dimensions of SERVQUAL (Saleh & Ryan, 199).

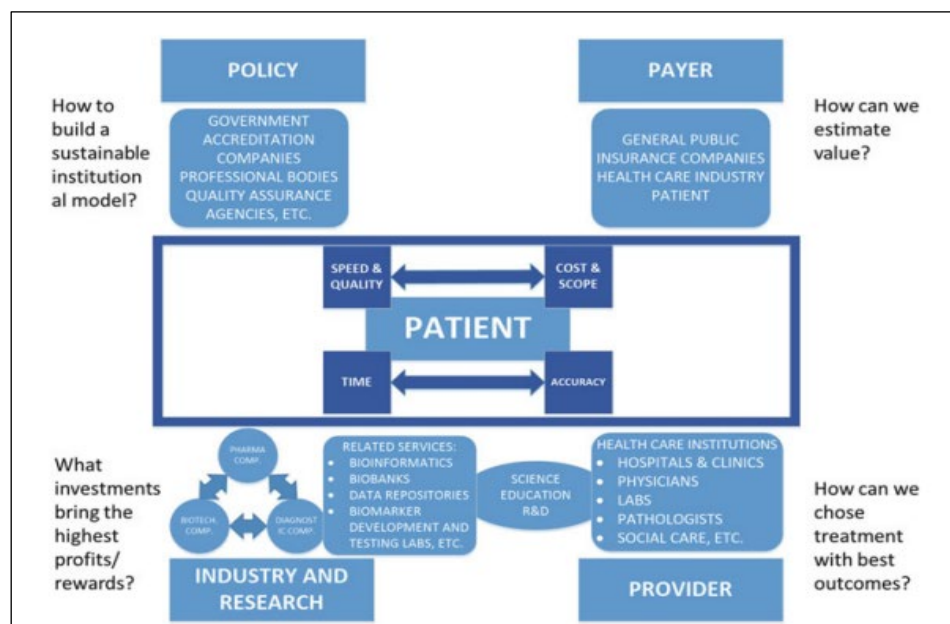
Moreover, the dynamic and subjective nature of guest perceptions in hospitality settings necessitates using customised service quality measurement tools that account for the unique characteristics of this industry (Ladhari, 2009). Furthermore, in the digital realm, where services are delivered through online platforms and mobile applications, traditional service quality models like SERVQUAL may not fully capture the intricacies of the user experience. To keep up with the fast rate of technological advancement and changing consumer demands, it is necessary to constantly adjust and improve service quality evaluation frameworks. This includes taking into account aspects like website usability, app performance, and data security (Parasuraman, Zeithaml & Malhotra, 2005). Therefore, while SERVQUAL provides a valuable framework for assessing service quality in many contexts, its applicability may be limited in sectors or instances where the nuances of service delivery diverge significantly from its conceptual framework.

**Table 1. Application of The SERVQUAL Model and Limitations Identified**

Study	Industry	Scope/Findings	Limitations
Raza, Umer, Qureshi, et al. (2020)	Banking	Identified five dimensions of service quality (reliability, assurance, tangibles, empathy, responsiveness).	A limited sample size may not fully capture the nuances of all banking services.
Carman (1990); Andaleeb (2001); Hamid, Azim, Rahman et al. (2023)	Healthcare	Applied SERVQUAL to assess patient perceptions of hospital services.	Lack of standardisation in healthcare services, difficult to generalise findings.
Cronin & Taylor (1992)	Retail	Significant gaps between customer expectations and perceptions in retail settings were found.	Limited scope in terms of standardisations of retail subsectors may not capture the nuances of each industry.

Study	Industry	Scope/Findings	Limitations
Bozorgi (2007); Chen, Du, Zhang, et al. (2022); Li, Wu, Han & Li (2022)	Airlines	Demonstrated the applicability of SERVQUAL in assessing service quality in the airline industry.	Limited to a specific airline or region may not generalise to the entire industry.
Ladhari (2009); Saleh, Ryan & Ryan (1991); Wong, Dean & White (1999);	Hospitality	Identified dimensions of service quality specific to the hospitality industry.	Limited to a specific segment of the hospitality industry, such as hotels.
Alnsour & Alnsour (2014); Shava (2021).	Telecom	Extended SERVQUAL will include technological aspects in assessing service quality in telecom services.	It may overlook other important service quality dimensions not covered by the model.

Table 1 provides a comprehensive overview of studies utilising the SERVQUAL Model in the healthcare industry. These studies offer valuable insights into service quality perceptions and patient satisfaction within healthcare settings. However, applying this model within industries is not without its intricacies; for instance, some industries may exhibit greater disaggregation than others, with varying levels of specificity. For example, the banking sector may not have the same levels of granularity as the healthcare industry, where complexities exist at multiple levels (Raza, Umer, Qureshi, et al., 2020). The health sector presents unique challenges due to the intangible nature of services and the diverse competitors compared to sectors like hospitality or retail.



Source: Mrak & Sokolic (2019).

**Figure 2. Stakeholders in Healthcare Sector**

Furthermore, the complexities within each industry underscore the importance of understanding dynamics such as market structure, business nature, industry size, and the involvement of stakeholders. Appreciating these nuances is critical for practical service quality assessment and management, highlighting the need for tailored approaches to address the specific challenges and requirements of each industry (Carman, 1990; Parasuraman et al., 1993; Langer, Chew-Graham, Hunter et al., 2013; Al-Borie & Damanhour, 2013). The healthcare sector stands out as particularly complex due to several unique factors. Unlike other industries where consumers have control over their purchasing decisions based on preferences, in healthcare, patients often have limited control over the type of product or service they receive, as their health status primarily determines it. Additionally, as depicted

in Figure 2 below, the healthcare sector involves multiple stakeholders with unique complex dynamics (Mrak & Sokolic, 2019). Providers, for instance, may encompass medical service providers who wield authority or autonomy over the type of treatment patients receive. Conversely, administrators may oversee the management of access to services. Applying the SERVQUAL model in healthcare can result in various stakeholder interactions. While evidence of the model's application in the health sector remains unclear, it remains unclear whether these applications have adequately considered the dynamic interplay among stakeholders operating within complex environments. Further exploration is necessary to determine how these dynamics are incorporated into the SERVQUAL Model's application within the healthcare sector.

#### 4. APPLICATION OF SERVICE QUALITY MODEL IN THE HEALTH SECTOR

The utilisation of the SERVQUAL Model within the healthcare sector faces numerous challenges, which impact its applicability and effectiveness (Carman, 1990; Parasuraman et al., 1993; Langer, Chew-Graham, Hunter, et al., 2013; Al-Borie & Damanhour, 2013). Standardisation across healthcare services is notably lacking, complicating the generalisation of findings across different healthcare settings (Carman, 1990; Hamid, Azim, Rahman et al., 2023). Moreover, potential biases in patient responses, influenced by individual experiences, may skew perceptions (Parasuraman et al., 1993). Additionally, the intangible nature of care aspects, like empathy and communication, poses challenges to accurate measurement (Langer, Chew-Graham, Hunter, et al., 2013). The model's limited scope, particularly regarding hospital departments or specialities, may fail to capture nuanced differences. Furthermore, the dynamic nature of emergency care presents difficulties in accurately capturing rapidly changing patient perceptions (Al-Borie & Damanhour, 2013; Javed & Ilyas, 2018). Cross-sectional studies may not adequately capture long-term changes in perceptions and bases stemming from individual childbirth experiences can also influence patient satisfaction assessments (Srivastava, Avan, Rajbangshi et al., 2015; Setia, 2016; Liu & Xiaohang, 2023). Moreover, controlling for external factors impacting patient loyalty is challenging (Harriet, Arthur, Komunda & Mugizi, 2024). Limited generalizability due to a focus on specific healthcare facilities restricts broader applicability (Hamid, Azim, Rahman et al., 2023). Finally, biases in patient responses regarding perceptions of telemedicine services underscore the need for careful consideration of contextual factors (Haleem, Javaid, Singh & Suman, 2021).

Additionally, controlling for external factors influencing patient loyalty poses a considerable challenge (Harriet, Arthur, Komunda, & Mugizi, 2024). Socioeconomic status, cultural beliefs, and geographical location can significantly impact patients' perceptions and behaviours, making it difficult to isolate the effects of healthcare services alone. Moreover, the limited generalizability stemming from a focus on specific healthcare facilities hampers the broader applicability of research findings (Hamid, Azim, Rahman, et al., 2023). Studies conducted in a single setting may not capture the diversity of experiences and contexts across different regions or types of healthcare facilities, thereby limiting the transferability of results to other settings. Furthermore, biases in patient responses regarding perceptions of telemedicine services highlight the importance of considering contextual factors (Haleem, Javaid, Singh, & Suman, 2021). Patients' attitudes towards telemedicine may vary based on factors such as access to technology, familiarity with remote healthcare delivery, and trust in healthcare providers, underscoring the need for nuanced interpretation of patient feedback in telemedicine studies.

**Table 2. Service Quality Model in the Health Sector**

Study	Scope	Limitations
Ferreira, Vieira, Pedro et al. (2023)	Patient perceptions of hospital services were assessed using the SERVQUAL model.	Lack of standardisation in healthcare services and difficulty in generalising findings.
Lin, Xirasagar & Laditka, (2004).	Explored patient perceptions of service quality in outpatient clinics.	Potential bias in patient responses, perceptions influenced by individual experiences.

Study	Scope	Limitations
Langer, Chew-Graham, Hunter, et al (2013)	Application of SERVQUAL in assessing service quality in primary care.	Difficulty in measuring intangible aspects of care, such as empathy and communication.
Arasli, Ekiz & Katircioglu (2008); Liu & Xiaohang (2023).	Patient satisfaction with hospital services was evaluated using the SERVQUAL model.	Limited scope in hospital departments or specialities may not capture nuances.
Dopeykar, Bahadori, Mehdizadeh et al (2018)	Service quality perceptions in dental clinics were examined based on the SERVQUAL model.	Potential bias in patient responses and satisfaction is influenced by factors beyond service quality.
Al-Borie & Damanhour (2013)	Patient perceptions of service quality in emergency departments explored.	Owing to the inherent complexity of encapsulating the ever-evolving nature of emergency care, perceptions are susceptible to swift shifts.
Arasli, Ekiz & Katircioglu (2008); Liu & Xiaohang (2023)	The relationship between patient satisfaction and service efficacy within hospital settings.	The cross-sectional nature of the study may not capture long-term changes in perceptions.
Karkee, Lee & Pokharel (2014) Srivastava, Avan, Rajbangshi et al. (2015)	Service quality perceptions in maternity care assessed using the SERVQUAL model.	Potential bias in patient responses and satisfaction influenced by individual childbirth experiences.
Harriet, Arthur, Komunda & Mugizi (2024)	Impact of service quality on patient loyalty in healthcare settings examined.	Difficulty in controlling for external factors influencing patient loyalty.
Andaleeb (2001); Shie, Huang, Li et al (2022)	The relationship between service quality dimensions and patient loyalty was investigated.	Limited generalizability due to focus on specific types of healthcare facilities.
Haleem, Javaid, Singh & Suman, (2021)	The applicability of the SERVQUAL Model in assessing service quality in telemedicine has been explored.	Potential bias in patient responses and perceptions of telemedicine services may differ.

## 5. CONCLUSION

Service quality assessment is essential for organisations across industries to meet and exceed customer expectations, enhancing satisfaction and loyalty. While traditional service quality dimensions remain relevant, recent advancements have expanded the concept to include accessibility, communication, and personalisation. However, applying service quality models such as SERVQUAL faces challenges, particularly in healthcare industries where standardisation is lacking and intangible aspects are prevalent. Addressing these challenges requires tailored approaches considering industry-specific dynamics and customers' evolving needs.

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