

# Understanding Service Quality from the Performance Perspective in the Healthcare Industry

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**Abstract:** *Service quality is a popular measure of quality output not only in the healthcare industry, but in other industries. Organizations use quality as a basis to meet the standard performance of their internal and external requirements. Nevertheless, the needs of the external standards, such as those of the customers, are more important than those of the internal. In addition, the needs or aspects that should be satisfied in "quality" vary from one industry to another. Later, organizations swayed their interest to providing quality service, which has become a sensitive term over the years. The study mainly emphasises on long debated comparison is made between the SERVPERF and SERVQUAL models. Even so, this concept has not been used to define the organisational performance, though the measure has previously been used to measure different aspects of quality output. The various service quality models analyzed and the meaning of service quality is discussed. This review is based on the healthcare industry. The report establishes a future recommendation for a study on organisational factors relating to service quality from the context of employee service performance.*

**Keywords:** *service quality, healthcare, service performance*

## I. INTRODUCTION

Service quality refers to the "perceived serviced quality" and is evaluated from the "customer perspective" (Padma et al., 2009). Parasuraman et al. (1985) defined service quality as "the global evaluation or attitude of overall excellence of service." Wang and Shieh (2006) explained that "service quality is the difference between customers' expectations and perceptions of services delivered by the service firm." Initially, service quality had ten dimensions, as shown in Table 1, and was later revised to five dimensions, as shown in Table 2, as developed by Parasuraman and his associates. However, besides the gap model, there are other models used in many studies, such as the performance only model and technical and functional model. These are shown in Table 3.

The Zone Tolerance Model (ZOT) by Parasuraman, Berry & Zeithaml (1991) is based on the 'desired level', referring to the ultimate service that should be delivered. The other level is the 'adequate service' level where customers accept as minimum tolerance level of service. ZOT's definition of service performance is a service that is perceived by the customer as an acceptable standard (Zeithaml, et al, 1993).

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Performance above the zone is 'delighting' and below the zone can be wide or narrow, depending on the customer and the service attributes that the customer deems as important (Zeithaml & Bitner, 2003). Customer performance perception is expressed mathematically, as follows:

$$SQ_i = \sum_{j=1}^k P_{ij}$$

P = perception of individuals;  $i$  with respect to performance of service firm attribute to 'j'. For example, when customers have high expectations, the zone of tolerance will be wider and vice versa. The zone of tolerance is a customer evaluation for in-process service performance (Johnston, 1995). It is a range of service performances that a customer considers satisfactory. A low performance level is the level that a customer considers unsatisfactory. A low performance level will increase customer frustration, whereas a high performance level will increase their loyalty or dependency. When any performance by employees shifts out of this determined range, it impacts the customer's perception of service quality as shown in Figure 1. The model explains the expectations, performance, and outcome. It is important that any adequate performance that is meeting the required quality standard should be within the performance zone of tolerance. Organisations need to identify and understand the service process transactions that cause customer perceptions to move through each stage of this inception. It is equally important to understand the activities that effect the inception. As the popularity of SERVQUAL increased, its validity was widely criticised and debated, similar to the case of SERVPERF. Cronin and Taylor (1992) were the first to criticise and justify the need for SERVQUAL modification and termed it SERVPERF (Brady, Cronin & Brand, 2002). The practicality of using SERVQUAL was debated as well. Cronin and Taylor (1992) specified that performance should be measured, not "expected." This "performance measure" was only measured from the customers' perspective. Despite this case, some researchers are in favor of performance-based measures (Babakus & Boller, 1992; Cronin & Taylor, 1992; Boulding et al., 1993; Gotlieb, et al. 1994; Parasuraman et al. 1994; Hartline and Ferrel, 1996; Zeithaml et al. 1996; Brady, Cronin, & Brand, 2002; Butt & Run, 2010), whereas some agree that SERVPERF enhances accuracy (Forgatty, Catts & Fortin, 2000; Wang & Shieh, 2006). In measuring customers' perception, Cronin and Taylor (1992), as well as Teas (1993), later proposed SERVPERF and criticized the validity of the model proposed by Parasuraman et al. (1994), who later counteracted (Seth, Desmukh & Vrat, 2004).

Cronin and Taylor (1992) further argued that perceived service quality is an attitude and does not equate to satisfaction, which is the eventual result of an overall evaluation.

The conflict on this concept lies on the management's dilemma of whether to perform to the needs of perceived service quality by the customers or to have customers who can be satisfied with their performance. All performance instrument items of SERVQUAL sufficiently describe the instrument of service quality. These items are also used in SERVPERF. The performance-only scale can be expressed as:  $SQ$  (Service Quality) = (Performance) and Weighted SERVPERF is  $SQ = Importance \times (Performance)$ . Studies have proven that service quality should be conceptualised and measured as an attitude and be seen as a performance (SERVPERF) approach. The construct, convergent, and discriminant validities are evidenced in the presented instruments. Many researchers specified that service quality can be determined by subtracting customers' expectations from customers' perceptions ( $Q = P - E$ ). A positive score signifies a high service quality and vice versa (Padma et al., 2009; Butt & Run, 2010). As such, the service quality assessment is performance orientated. The following description discusses the extent that the service quality dimensions vary in the medical industry.

### II. QUALITY SERVICE VERSUS PERFORMANCE SERVICE IN HEALTHCARE

Defining quality and even the scale used in healthcare is difficult because of many subjective connotations. The Joint Commission of Health defined healthcare quality as *"the degree to which patient care services increase the probability of desired outcome and reduce the probability of undesired outcome."* This definition is similar to the interpretation provided by the Washington Institute of Medicine (Kapoor, 2011). Further, he interpreted quality in healthcare as the *"degree of adherence to pre-established standards based upon prevailing knowledge and practices."* On a general term, *"quality in a product or service is not what the supplier puts in, it is what the customer gets out and is willing to pay for"* (Kapoor, 2011). The "service quality" in healthcare can vary greatly depending on the patients' experience, such as hospital comfort. Patients are able to evaluate service quality with better accuracy than clinical quality (e.g., surgical skill) (Bakar, Akgün, & Al Assaf, 2008). This is because clinical quality involves technical assessment that the patient may not understand. Some authors broadly defined healthcare quality as determining customer expectations or providing the best service and the organisations ability either to meet or exceed customers' expectations. Organisations use quality as a basis to meet the standard performance of their internal and external requirements. Nevertheless, external needs, such as those of the customers', are more important than internal needs. In addition, the needs or aspects that should be satisfied in "quality" vary from one industry to another. At the beginning of the industrialisation era, quality attention was directed toward the manufacturing of goods. Later, organisations modified their interest to providing quality service, which has become a sensitive term over recent years. Although service quality is significant for many countries and various industries, healthcare service is always seen as a high-risk involvement (Rashid & Jusoff, 2008). Service quality is not only seen as a technical quality, but a functional quality as well, particularly on how services are

delivered to customers (Rashid & Jusoff, 2008). Customers in healthcare are the patients who need medical attention and who carry different values and views (Duggirala et al., 2008). A considerable amount of effort was devoted to improving the quality in healthcare services, but the limitations in the conveyance of effective and trustworthy care continues to persist (Boyer, Gardner, & Schweikhart, 2012; Carman 1990). Table 4 illustrates the level of importance of service quality in the healthcare setting using various dimensions. It is notable that there is a lack of emphasis given on measuring employee performance. SERVQUAL and SERVPERF have far more dimensions that emphasise the employee competency dimension over other organizational variables. Many researchers have developed or adapted numerous service quality scales that suit the needs of varying healthcare settings in different countries. The dimensions used or developed by researchers generally possess some similarities. This is the reason that SERVQUAL and SERVPERF were the underlying models for the newly proposed instruments and recently conducted studies. Some of the common analyses can be grouped into services and empathy by hospital staff (doctors, nurses, etc.), amenities, and facilities. Some researchers have tried to develop a precise scale that will fit a certain hospital setting. Seth, Deshmukh, and Vrat (2005) examined and critically reviewed 19 different service quality models to identify a linkage between them. The key factors for improving service quality included market and customer focus, motivated staff, strong understanding of service quality and the factors that affect it, effective performance feedback system, and an effective customer care system. Duggirala et al. (2008) developed seven critical dimensions of healthcare quality. One of these dimensions is personnel quality, which refers to the type of care given by doctors and nurses. Duggirala et al. (2008) determined that patients seek confidence, knowledge, and access to safe treatment from hospital staff. Tangibles are seen as infrastructure, and reliability is identified as a process of clinical care, administrative procedures, and is a safety indicator. Responsiveness, assurance, and empathy are regarded as the quality of personnel and, overall, the experience of medical care and social responsibility. However, the items of these dimensions are a set of widely comprehensive mechanisms for understanding the healthcare system. The questionnaire was administered to all respondents who stayed and attended medical treatment for less than six months. The dimensions of service quality are strongly positively and significantly related to one another at a 0.01 significance level. Similarly, the seven dimensions (31 items) of service quality were developed by Duggirala et al. (2008) and were found to have a strong, positive, and significant relationship at a 0.01 level of significance. Based on their research, Padma et al. (2009) later developed an instrument to suit the healthcare service context.

In particular, these researchers conceptualised service quality to eight dimensions including infrastructure, personnel quality,

process of clinical care, administrative procedure, safety indicators, hospital image, social responsibility, and trustworthiness of the hospital. Another scale for service quality identifies these dimensions (Bakar et al., 2008) concisely, as follows: interpersonal characteristics (i.e., respect, emotional support, and cultural appropriateness), access with location, waiting time, service hours, appointment delay, and amenities (e.g., food, environment, furnishing). Padma et al. (2009) proposed a framework for measuring performance on service quality in a hospital setting from the perspective of patients and attendants (family members/friends).

Aagja and Garg (2010) developed a scale for public hospitals that measures service quality from the patients' perspective. In this measurement, the standard scale is followed based on experts' review. The service quality of public hospitals is a reliable and valid scale, and measures five dimensions of hospital service quality, including admission, medical service, overall service, discharge process, and social responsibility. These dimensions are primarily considered based on SERVQUAL and SERVPERF, as well as on Goonroos' functional and technical qualities. On the other hand, the dimensions of admissions, medical service, overall service, and discharge were adapted from Carman (1990) and Rust and Oliver (1993).

In Britain, the public healthcare sector needs modification by establishing "new public management" (Black, Briggs & Keoh, 2001). The measurement of service quality is the single most important dimension of performance for service-

based organisations (Black et al., 2001). These organisations are interested and motivated to improve their service quality continuously. Additional conceptual and practical works are necessary to permit hospitals to address the measurement of service quality.

Some studies claimed that SERVQUAL is a reliable measure in healthcare, but fails to capture the healthcare dimension (Babakus & Mangold, 1992). SERVQUAL is important in tailoring to a sector's specific needs, culture, or nation (Butt & Run, 2010; Parasuraman, Berry & Zeithaml 1991). Critics argue that organizational performance should be measured as a service quality component (Sureshchandar et al., 2001). Many researchers have discarded the "expectation" in the gap model of measuring service quality, although SERVQUAL is still a preferred model in many sectors (Butt & Run, 2010; Parasuraman, Zeithaml, & Berry, 1985). Andaleeb (1998) explored the dimensions of communication, cost, facility, competence, and demeanor. Bowers, Swan, and Koehler (1994) studied human interaction and the relief from pain and suffering following treatment excluded in SERVQUAL. Many of the scale adaptations from SERVQUAL and SERVPERF are based on functional and technical qualities. Considering these scales, studies were conducted in the healthcare industry and have contributed to the development of quality clinical services and settings as well as the identification of patients' needs and expectations or demands.

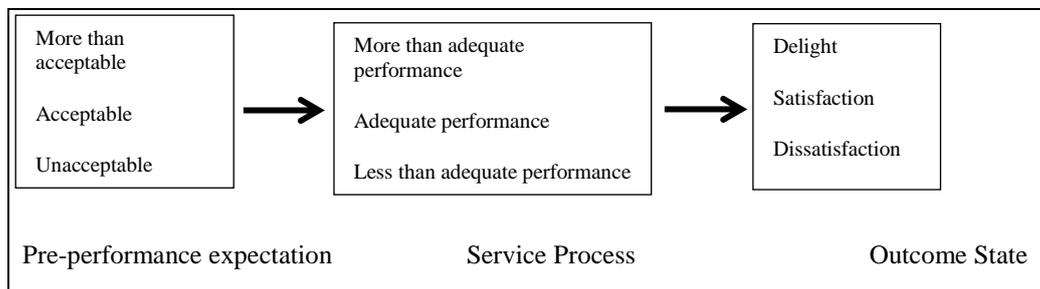


Figure 1 Zones of Tolerance (Johnston, 1999)

Table 1

SERVQUAL ten dimensions	Definition
Tangibles	Appearance of physical facilities, equipment, personnel printed and visual material
Reliability	Ability to perform the promised service reliable and accurately
Responsiveness	Willingness to help customers and provide prompt service
Competence	Possession of required skills and knowledge to perform service
Courtesy	Politeness, respect, consideration and friendliness of contact personnel
Credibility	Trustworthiness, believability, honesty of the service provider,
Security	freedom from danger, risk or doubt
Access	Approachability and ease of contact

# Understanding Service Quality from the Performance Perspective in the Healthcare Industry

Communication	Listening to customers and acknowledging their comments, keeping customers informed in a language they can understand
Understanding the customer	Making an effort to know customers and their needs

*Dimensions of SERVQUAL(Zeithaml et al.,1990)*

Table 2

SERVQUAL Dimensions (Original Dimensions)	Definition
Tangibles(tangibles)	Appearance of physical facilities, equipment, personnel, and communication materials
Reliability (reliability)	Ability to perform the promised service dependably and accurately
Responsiveness (responsiveness)	Willingness to help customers and provide prompt services
Assurance (competence, courtesy, credibility, security)	Knowledge and courtesy of employees and their ability to convey trust and confidence
Empathy (access, communication, understanding the customer)	Caring, individualised attention that the firm provides to its customers

*Correspondences between SERVQUAL dimensions with original five definitions for evaluating service quality(Babakus&Mangold 1992; Elluech, 2008)*

Table 3

Author (year)	Model	Measurement model of service quality
Parasuraman et al. (1985)	GAP Model	Ten dimensions (reliability, responsiveness, access, communication, tangibles, courtesy, credibility, competence, understanding/knowing)
Cronin and Taylor(1992)	Performance only Model	SERVPERF (service quality based on perception)
Grönroos (1984)	Technical and functional quality model	Functional and technical quality

*Service quality models*

Table 4

Author	Measurement/Model/Framework	Dimensions
Ramsay et al.(2000)	General Practice Assessment Survey (GPAS)	Access, technical care, communication, interpersonal care, trust, knowledge of patient, nursing care, receptionist, continuity of care.
Grol&Wensing (2000)	European Society for Quality in Family Practice (EQUIP)	Technical care, doctor patient relationship, information and support, availability and accessibility.
Baker & Whitfield (1992)	Consultation Satisfaction Questionnaire (CSQ)	General satisfaction, professional care, depth of relationship, length of consultation
Duggirala et al. (2008)	Modified SERVQUAL	Infrastructure, personnel quality, process of clinical care, administrative procedures, safety indicators, overall experience of medical care received, social responsibility
Aagja&Garg (2013)	Modified GAP MODEL and Carman 1990, Rust and Olivers(1994) called as PubHosQual	Admission, medical service, overall service, discharge, social responsibility



Andaleed (1998)	Modified SERVQUAL	Communication, cost, facility , competence, demeanor
CheRose,Uli& Abdul ( 2004)	Modified SERVQUAL	Security, performance, aesthetics, convenience, economy, reliability.
Tomes & Ng (1995)	Modified SERVQUAL	Empathy, understanding of illness, relationship of mutual respect, dignity, food, physical environment, religious needs.
Padma et al. (2009)	Several models and factor	Infrastructure, personnel quality, process of clinical care administrative procedure, safety indicator, corporate image, trustworthiness of the hospital
Rust & Oliver (1994)	modified SERVQUAL	Service product, service environment, service delivery
Donabedian (1980)	Framework structure, process and outcome	Efficiency, effectiveness, optimality, acceptability, legitimacy & equity.
Carman (1990)		Admission, tangibles, accommodation, tangible food, tangible privacy, nursing, explanation for visitor access, courtesy, discharge planning, and patient's accounting perception.
Massachusetts Health Quality Partnership (MHQP)(Friedberg, et al. 2009)	Massachusetts Health Quality Partners	Quality of doctor (patient interaction, communications, integration of care, knowledge of the patient, health promotion), organization features of care (organisational access, visit based continuity, clinical team, staff
Tucker & Adam (2001)	Modified SERVQUAL	Caring, empathy, reliability, responsiveness
Boshoff& Gray (2004)	Modified SERVQUAL	Communication, tangibles, empathy of nursing staff, assurance, responsiveness of administrative staff, security and physician responsiveness

*Summary of healthcare dimensions for service quality from past literature*

### III. RESULT

In this paper we observed that, it is timely to measure service quality from the perspective of employee service performance. A common scale needs to be acquired to evaluate employees' performance in healthcare organisations. It can be argued that employee service performance has not been widely measured for organisational purposes. The employee service performance dimensions can be measured by linking them with antecedent factors, such as organisational learning and organisational innovativeness. Service quality based on this review has shown that its overall functional evaluation requires more critical evaluation.

### IV. CONCLUSION

It can be understood that evaluation of the service quality has increased in significant over the past few decades, particularly in the healthcare industry. However, the service

quality measure was added to the healthcare function. In general, the service quality evaluation was aimed towards customer satisfaction, which so far has not proven to be relevant to the organisational performance need. In order to enhance the competency among employees in organisations, evaluation of service performance becomes a metaphor for this era. This review attempted to fill the gap by assessing the outcome of service quality. A significant emphasis should be skewed towards evaluating employees' service performance so that employee competency can be enhanced.

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# Understanding Service Quality from the Performance Perspective in the Healthcare Industry

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