

## Healthcare Service Quality Dimensions in Various Countries

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**Abstract:** This paper makes an attempt to study the various definitions of service quality, service quality measurement scales, their application in various service sectors, the methodology adopted for measurement of service quality, various methods of analysis of data in various countries. The subject of service quality is very rich in context of definitions, models, the measurement issue, the method of analysis. Other countries are totally different in terms of social, economical, geographical size, environment, religious disparity, literacy, language and in many other factors. Hence it is important at this stage to study the various researches and test the suitability of these models and dimensions of service quality in Indian context. The review of service quality of healthcare literature revealed that the service quality has affected by number of factors which are needed to focus for improvement of service quality. These factors depend on the type of service sector, need, type of respondent, socio – demographic background of stakeholder, culture and belief. After the reviews of service quality of healthcare sector literature, it is observed that there is an urgent need to identify the determinants of service quality of health care sector and to develop the service quality model in Indian context.

**Keywords:** service quality, Healthcare service quality, service quality dimension, service quality measurement.

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### I. Introduction

The term “service quality” has been defined in several ways. Parasuraman et al. (1985) describes the word service quality as “a measure of the degree of discrepancy between consumers’ perceptions and expectations”. “Consumer dissatisfaction occurs when expectations of the consumers are greater than actual performance of service delivering organizations and perceived service quality is less than the satisfactory level.” Gronroos (1984) defines service quality as a function of expectations, outcome and image. Today most of the researchers, academicians, managers, practitioners concern with service sector are mainly focusing on service quality which is one of the important factors for achieving success in business through customer satisfaction, customer retention, customer loyalty and profitability. Still it is not possible for researchers to propose a generic definition of service quality which will be applicable for all service sectors. This is because of the characteristics of services which are intangibility, heterogeneity, inseparability and perishability. All over the world still researchers are trying to define, measure service quality for various service sectors. The meaning of quality for individual to individual is different, it depends on various factors such as culture, environment, socio-economic conditions, demographic factors. Most of the research on service quality are carried out in developed countries because of their early awareness about the importance of service sector in the economy of the country. To achieve success in business, it is important to know the concept of service quality, the factors influencing service quality. Various researchers have proposed the service quality models to understand the concept of service quality, to provide the direction for improvements.

### II. Service Quality

Due to intangibility, inseparability, heterogeneity, and perishability characteristics of services, it is very difficult to define service quality. Various researchers have defined healthcare service quality in their study which is given in table I.

**Table I: Summary of service quality definition**

S.N.	AUTHOR	YEAR	DEFINATION
1	Christian Gronroos	1984	Service quality is usually evaluated in terms of technical quality and functional quality.
2	Leonard Berry et al.	1988	“Conformance to customer specifications”—that is, it is the customer’s definition of quality that matters, not that of management.
3	Avais Donabedian,	1988	Quality has also been defined as "The abilities to reach the desired objectives using legitimate means ", where the desired objectives implied "the achievable level of health"
4	Czepiel	1990	Service quality may be defined as “customer perception of how well a service meets or exceeds their expectations.”
5	Ovretveit	1992	Fully meeting the needs of those who need the service most ,at the lowest cost to the organisation ,within limits and directives set by higher authorities and purchasers.
6	Qvester and Romaniuk	1997	Service Quality means “Meeting or exceeding the expectations of customers”
7	Yu and Dean,	2001	Quality of service is defined as an instrument to measure the satisfaction and dissatisfaction of educational experiences
8	Sachdev and Verma	2004	Service quality can be measured in terms of customer perception, customer expectation, customer satisfaction, and customer attitude Due to intangibility ,inseparability, heterogeneity , and perishability characteristics of services ,it is very difficult to define service quality. Various researchers have defined service quality in their study which is given in table 5.1

### III. Literature Review

#### USA

**Parasuraman et al. (1985)** proposed that service quality is a function of the differences between expectation and performance along the quality dimensions. Parasuraman et al.(1988) proposed a service quality measurement scale SERVQUAL . With the help of SERVQUAL they measure the customers perception of service quality. In 1985 they proposed that ten dimensions of service quality ie. reliability, responsiveness, tangibles, assurance, communication, competence, credibility, courtesy and security. Later SERVQUAL was revised in 1991 by replacing “should” word by “would” and in 1994 by reducing the total number of items to 21, but five dimensional structure remaining the same. The original SERVQUAL scale was developed and tested in four service sectors securities brokerage, insurance co., banks and repair and maintenance. The SERVQUAL scale contains total 44 service attribute out of which 22 are designed to measure the expectation of the customer and 22 items are designed to measure the perceptions of customers. The service quality is measured by subtracting the perceptions score from the expectation score.

**Babakus et.al (1990)**, used SERVQUAL scale to measure the service quality of a hospital. Two forms of quality are relevant to service-providing organizations: technical quality and functional Quality (Gronroos 1984). The author pointed out that the SERVQUAL is useful to measure only functional quality (defined as the manner in which the health care service is delivered to the patient) of the organisation.However, functional quality in a health care setting cannot be sustained without accurate diagnoses and procedures. A final modified SERVQUAL scale with 15 pairs of matching expectation and perception items representing all five items ( Reliability, assurance , tangible , Empathy , and Responsiveness) was developed. A five point Likert response format ( ranging from strongly agree =5 to strongly disagree =1 ) was used instead of seven point scale format after opinion of expert and management. Factor analysis and correlation were used to assess the validity of the study. The coefficient alpha values for the expectations subscales were .587, .677, .715, .801, and .495 for tangibles, reliability, responsiveness, assurance, and empathy, respectively. Coefficient alpha values for the perceptions subscales were .782, .759, .903, .892, and .874 for tangibles, reliability, responsiveness, assurance, and empathy, respectively.

In this study the author tested the modified scale in only one midsized hospital, located in the southern part of the United States. The patients who discharged from the hospital was taken into consideration. The other stakeholders of hospitals such as inpatients, management and staffs are not involved in the study. The questionnaire was sent by postal mail in which the reliability about the response from the patient is very less.

#### GUINEA

**Slim Haddad et al. (1998)** attempt to develop patients perceived quality scale for measurement of perceived quality of primary health care services in developing countries. The author develop a 20 item scale includes three subscale related to health care delivery, personnel and facilities. The scale was tested on 241 people in one city and two villages in upper Guinea. The reliability of subscale ranges from 0.71 to 0.88. The author reviews 16 studies which concern with the healthcare services and in close to half, they are family planning services. The determinants of quality of healthcare sectors are personnel’s technical competence,

effectiveness of care, personnel attitude and conduct ,availability and adequacy of resources ,accessibility of services.

The author suggests that the scale developed in this study may be tested in other context because the diverse nature of quality changes with the type of work environment, culture and depend on specific context.

#### **BANGLADESH**

**Syed Andaleeb (2008 )** studied the links between service quality and patients satisfaction in the context of health services delivered to children in developing country like Bangladesh. A 20 item representing the assurance, tangibles, empathy , responsiveness, communication ,input adequacy , facilitation payments , and satisfactions ,scale was developed . A survey of 308 parents of patient child obtained services from 35 private and public hospitals and clinics in Dhaka city was conducted . after factor analysis the factor observed are nurse composite , doctor composite , tangible composite and input adequacy ( or availability of needed inputs ). These factors were assessed for reliability using Cronbach's alpha ranges between 0.63 to 0.93. It is observe that to improve service quality of health care it is necessary to improve the behaviour of doctors, nurses and other supporting staff of the hospital. Service quality has significant effect on customer satisfaction.

#### **MALESHIYA**

**Sohail S.M. (2003)** measure the service quality of private hospitals in Malaysia using modified version of SERVQUAL scale as recommended by Parasuraman et al. The survey questionnaire containing 15 pair of questions were designed on the basis of five service quality dimension: Tangibles, Reliability , Empathy , Reliability and Access. The survey questionnaire were tested from 150 patients who had been discharged from five hospitals across Malaysia within the previous six months. The responses from the patients were collected through paid postal mail. Confirmatory factor analysis was conducted to test the unidimensionality of the each item. The reliability coefficient cronbach's alpha values ranged from 0.631 to 0.8669 for all five dimensions. The peoples expectation of health and medical services are also likely to change with time.

#### **INDIA**

**Ranjit Chakraborty and Anirban Majumdar (2011)**, focuses on the measurement of patient satisfaction in the light of service quality provided by hospital. A detailed review of literature were considered to investigate the relevance of service quality in measuring patients satisfaction in healthcare sector in today's competitive environment. In spite of popularity of SERVQUAL various researchers pointed out the limitation of SERVQUAL about its low reliability and construct validity. The author at the end propose that there is a need to go deeper in to the subject matter of a the applicability of SERVQUAL model in Indian context.

**Sethilkumar and Prabhakaran (2011)**, attempted to determine the dimensions of service quality,important to patients ,healthcare providers and managers of healthcare sector for optimising the perspective of different healthcare stakeholder for enhancing the service quality. Most of patients do not have the knowledge about the technical quality. Many researchers found that SERVQUAL do not encompass all the dimensions of professional service quality and additional dimensions should be added ,representing more technical quality aspects. Based on literature review and expert opinion the author proposed eight service quality dimensions : Accessibility, Safety, Tangibles ,Efficiency , Interpersonal relations , Technical competence , Effectiveness and Outcome . the author have not given details about the measurement of service quality of healthcare service. A empirical validation is needed for the suggested dimensions.

#### **BURKINA FASO**

**Baltussen et al.(2002)** conducted a study to measure the perceived quality of care of health care services in Nouna, Burkina Faso. The objective of study was to inform policymaker about the strengths and weaknesses of the quality of government primary health care services, as perceived by users,which can help to define starting points to improve quality of care and to develop the analytical framework for the measurement of perceived quality of care. A 20 -item scale ,divided in to four subscales containing the questions related to service quality dimension :Health personnel practices and conduct, Adequacy of resources and services, health care delivery ,financial and physical accessibility. The scale was tested on 1081 users and 11 health care centers in the district of Nauna,in rural Burkina Faso. The respondents were relatively positive on items related to health personnel practices and conduct and to health care delivery but less on other items related to adequacy of resources and services and to financial and physical accessibility . The author concluded that the priorities for health policy action are,improvement in drug availability and financial accessibility to health services .

#### **ISTANBUL**

**Havva Caha(2007)** uses a modified version of SERVQUAL scale having 34 statement and collected a data from 100 randomly selected patients from 4 private hospitals of Istanbul and measure . Based upon the a

survey this study uses a dynamic model in determining the service quality and customer satisfaction in private hospitals in Turkey. It is found that the patients prefer private hospitals. The study indicates that patient's satisfaction is the most important factor for private health care providers in Turkey.

#### **IRAN**

**Asghar Zarei et al.(2012)** applied a modified SERVQUAL scale consisting of 21 items based on service quality dimension :Reliability, Assess, Tangible, Empathy , Responsiveness, to measure the service quality of hospitals in Iran. A study was conducted among 983 patients randomly selected from 8 private hospitals in Iran. The results from factor analysis did not confirm the structure suggested by Parasuraman et al. and three dimensions of Reliability, Responsiveness, and Assurance were converted into a single dimension. The study found that the patients in private hospitals of Iran define the service quality in three dimensions: Tangibles, Reliability /Responsiveness and Empathy. The results of study indicate that woman's expectation score was higher than that of men. The authors restrict the generalizability of the results. For improving quality of services of hospital it is necessary to focus on modernization of equipments, timeliness of care delivery, accuracy of performance and enhancing the interpersonal relationships, communication skills of physicians, nurses and other personnel of the hospital.

#### **LITHUANIA**

**Zaneta Pilgrimienė et al.(2011)** explore the differences and similarities of health care service quality perception between two groups within healthcare organization: managers of Healthcare organization and health care professionals. A systematic and comparative analysis of scientific literature, empirical quantitative survey research was employed using self-administered questionnaires containing 72 items representing health care attributes ,each of which representing the 13 service quality dimensions selected from the literature review. Data was collected from 318 health care professional and 75 from administrators of health care organisation in five hospitals of Lithuania. A research finding shows that the most important quality dimensions for healthcare professionals and Managers of health care organisation are those which represents the technical quality. The managers also gives more important to functional quality such as reliability ,reputation of health care organization and courtesy to patient . Hence it is confirm that the managers and professionals perceive health care service quality differently. Cultural ,social and economical peculiarities of different countries might also have an influence on health care service quality perceptions.

#### **NIGERIA**

**Mejabi and Olujide(2008)** conducted a research study in Nigeria for developing service quality measurement scale and to find out the service quality dimension of health care sector of Nigeria. The authors develop a measurement scale containing 39 service quality attributes on which respondent rated the hospital on importance and performance. The four point likert scale is used for evaluation of responses. The results indicates that eight dimensions – Recourses availability, Quality of care, Condition of clinic/ward, Condition of facility, Quality of food, Attitude of doctors and nurses, Attitude of non-medical staff, and waiting time for service , best describe the health care service quality of hospitals in Nigeria. The reliability coefficients represented by Cronbach's alpha value ranges from 0.74 to 0.94 .

#### **AFGANISTAN**

**Peter M.Hansen et al.(2008)** aimed to identify the determinants of service quality of primary health care services in Afghanistan. A composite scale of quality of care was developed using four measures i)patients histories,ii)Physical examinations iii) communication and iv) time spent with patients. An exit interview was conducted . the final sample included 617 health facilities in all 33 provinces ,1553 health workers,5719 direct observations of patient-provider interactions and 5597 exit interviews. The result of study shows that, no differences in service quality was observed between male and female providers, but when both the provider and patient were female quality was much higher. Remoteness, facility type, provision of timely salary paments and in service training were found not to be associated with quality. This study provides evidence that lack of female provider result in adverse effect on quality of care in female patients. A major limitation of this study is the lack of empirical assessment of validity and reliability of the measures.

#### **VIETNAM**

**Dat Vat Duong et al.(2004)** examine the feasibility ,reliability and validity of 20 item scale developed by Hadded for measuring the perceived service quality of maternity services in Vietnam. A survey of 200 women who gave birth and 196 pregnant women in 34 healthcare centres, was conducted to collect data for determining the dimensions of service quality. A factor analysis was conducted which results in identifying four dimensions :Health care delivery , health facility , Interpersonal aspects of care and access to services. The

reliability Cronbach's alpha coefficients for the dimension health care delivery and health facility ,interpersonal aspects of care and access to services were 0.72,0.64,0.72 and 0.33 respectively. The maternity status has significant influence on the perceived service quality of maternity services.

#### **ZIMBABWE**

**Charles Hongoro et al.(2005)**uses a prospective approach to measures the service quality of hospital tuberculosis services in four Zimbabwe hospitals. A data was collected from 138 patients charts and interviews and ward staff for verification of patients record. A statistical comparison of quality scores across hospitals were made using chi-squared and analysis of variance. Notably quality gaps are observed between actual and maximum quality levels in all four hospitals. It is feasible to conduct prospective quality assessment in developing countries with minimal disruption of routine activities. The study shows that prospective exploration of health care quality for specific diagnosis can provide insights in to hospital-level quality issues.

#### **AUSTRALIA**

**Alan Baldwin and Amrik Sohal (2003)** examine the strength of relationship between service quality practices & service quality outcomes in dental care. The author attempt to find out the most important aspect which affects the perception of service quality of dental care services. A SERVQUAL scale is used to collect the responses from the people. A data was collected from 354 people of Australia through postal mail .After factor analysis four dimensions are identified as a most important dimensions which affect the perception of dental service quality. These identified dimensions are Responsiveness , Empathic assurance , Reliability and Tangibles.

#### **EGYPT**

**Mohamed Mostafa (2005)**,attempt to investigate that how patients perceives service quality in Egypt's public and private hospitals and test the SERVQUAL dimensions in hospitals within an Arab non-Western context. The data was collected from 332 patients (177 from public hospitals and 155 from private hospital patients) of 12 hospitals in Egypt. The result does not support the five-component original SERVQUAL. The result focused a three factor solution for the SERVQUAL instrument. It is observe that the private hospitals are preferred than public hospital.

#### **PAKISTAN**

**Rizwan Ahmad and Hina Samreen (2011)**, explore the dimensions of SERVQUAL scale which are significant determinants of service quality in terms of satisfaction in the selected hospitals of Karachi, Pakistan. A data of 252 outpatients of three selected hospitals each from public sector , private sector , and semi public sector. The factor analysis was performed which result that the factors Reliability and Responsiveness, Tangibility and Professionalism, Empathy and Affordability as the statistically significant determinants of patients satisfaction. A three regression model of satisfaction was developed .

#### **TAIWAN**

**Ching Teng et al.(2007)** make attempt to develop a service quality scale for surgical hospitalization(SQSH). A 42 item survey questionnaire was designed to conduct survey for developing service quality scale. A total of 253 patients in six surgical department : general surgery, orthopaedics, urological surgery ,rectal surgery ,trauma surgery and cosmetic surgery of one hospital in Taiwan. A 29 item were retained through the scale development process and six factors were identified are as need management, Assurance , Sanitation , Customization ,Convenience and quiet , and attention explained 57.3 % of total variance. The reliability Cronbach's alpha value for scale items was 0.642 and all factors loading exceed 0.5. The hospital services are provided by the number of departments . It is not easy to measure the quality of all services provided by the all department of hospitals. Due to unconsciousness of patients it is not possible to collect the response from the patients.

#### **SRI LANKA**

**Upul Senarath et al.(2011)** developed a 36 item instrument to measure the service quality of nursing care and related hospital services at the national hospital of Sri Lanka. First a questionnaire of 72 item were designed . A data was collected from 120 patients stayed in general surgical or medical units . After factor analysis only 36 items found relevant. The eight factor Interpersonal aspects ,efficiency , competency, comfort ,physical environment , cleanliness , personalized information and general instructions found most significant for measuring service quality of nursing care and other hospital services . The value for Cronbach's alpha coefficient found more than 0.75 for whole instrument .

## ROMANIA

**Cornelia and Simona (2009)** make attempt to present the differences in patients perception on healthcare service quality on a sample of ten Romanian clinics. The author selected three variables namely the perceived competence of physicians, the perceived competences of nurses , and the empathy of the hospital personnel. The data was collected from 50 patients from ten clinics through PROXSCAL multidimensional scaling method based on five point likert scale. It is found that the patients perceptions on the quality of their services ,divided between perceived competence of the doctors ,perceived competence of the nurses , and overall empathy of the medical staff of the considered clinic. The results of study shows the patients prefer specialized hospital rather than general hospital.

## IV. Conclusion

An attempt is made in this paper to review the various service quality models and various research studies on measurement of service quality of healthcare in number of country. The subject service quality is complex due to its dependence on type of service setting, environment, need, time, culture, economical and educational ability, etc factors. It is observed that all the models studied are not specially designed for healthcare setting.

It is observed that most of the studies used SERVQUAL scale to measure the service quality of healthcare services. Health care sector is quite different than other service sectors. In case of bad service in healthcare may result the death of the customer. The review showed that

- At present there is no any healthcare service quality model available in india to measure the service quality of Indian healthcare sector.
- There is a need to find out the determinants of Indian Healthcare service quality concern with all stakeholder of healthcare services.
- There is a need to develop the a service quality model for healthcare sector in Indian context. To identify the various determinants of service quality of healthcare in India.
- There is a need to explore the relationship of between the socio-demographic factors and the perception of service quality.
- There is a need that how the different methods of conducting surveys affect the response rates and patients evaluation of service quality.
- There is a need to develop the relationship between service quality and customer satisfaction, loyalty, profitability and purchase intension.

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